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FULL Show Report page 11

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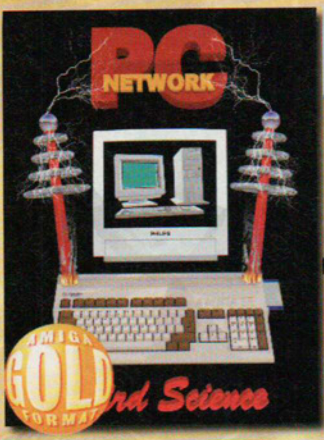
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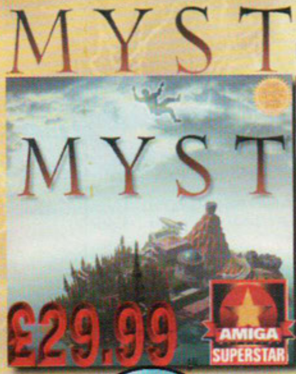


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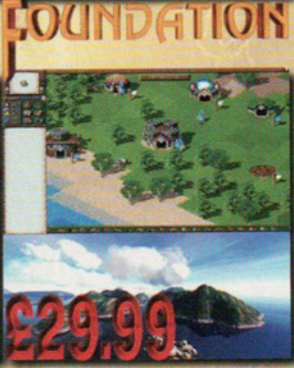
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We will PRICE MATCH on Software

Month In View

In the aftermath of the most happening WOA show for years, **Nick Veitch** has something he'd like to say.

The World of Amiga show was certainly the best in years, and if you haven't heard about what was said and done there, I suggest you go and read our news pages and special show report now. Don't worry about me, I'll still be here when you get back.

Right. What did you make of that? One thing I have to get off my chest is my annoyance at some of the people who have sent us messages or posted pages on Websites complaining about the new Amiga. "It's outrageous," they say, "In two year's time I'll have to throw my Amiga away and buy a new one."

Well that's rubbish. Nobody is going to make you throw it away, you'll just have the option to upgrade to a newer, faster machine. If you don't want to buy a new machine then fine, keep the old one, but stop complaining – we've waited long enough for a new computer.

Okay, now that I've finished my rant (although I'm sure we'll get more letters), I can tell you about some of the other excellent stuff we have for you. I feel obliged to mention the PIC project which I spent hours on, but I shan't explain it here so turn to page 18 for all the details.

You should also examine the *Genetic Species* review in some depth. Perhaps it can't hope to match up to *Quake* on some levels but, believe it or not, it is superior in other respects – see for yourself on page 32.

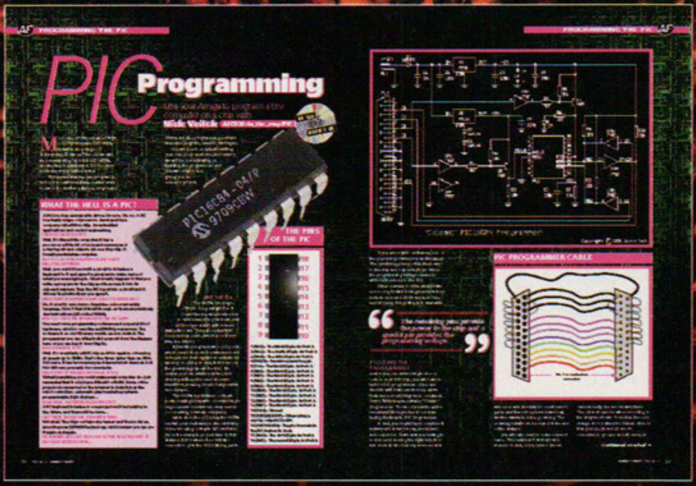
All that and our continuing tutorials and timely update on Java for the Amiga should keep you going for another month!



Nick Veitch
Editor



WORLD OF AMIGA SHOW '98 PAGE 11
The roar of the greasepaint, the smell of the crowd – everyone loves a show, and what a show we had. Read all about it here.



PIC PROGRAMMER PAGE 18
All you'll ever need to know about programming the PIC. You don't know what a PIC is? Don't worry, we explain that too...



GENETIC SPECIES PAGE 32
Having seen the review of *Quake*, you might be wondering how *Genetic Species* could be any better. It's horses for courses...

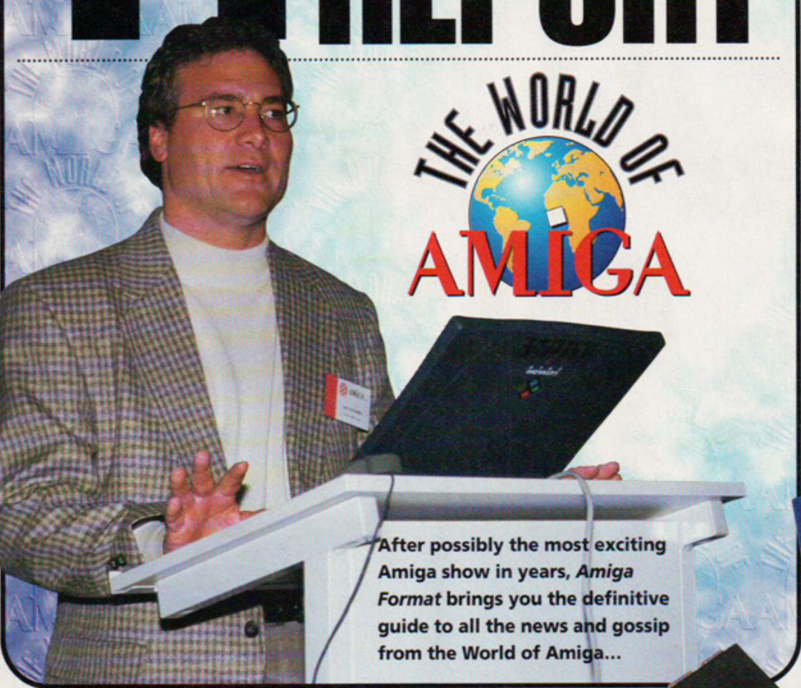


MASTER ISO 2 PAGE 62
Once the only viable software for CD authoring on the Amiga, *MasterISO* now has some stiff competition. Can this new version put it back on top?

AMIGA FORMAT Contents

ISSUE 112 **JULY 1998**

AF COVER STORY



After possibly the most exciting Amiga show in years, *Amiga Format* brings you the definitive guide to all the news and gossip from the World of Amiga...

AF CD-ROMS



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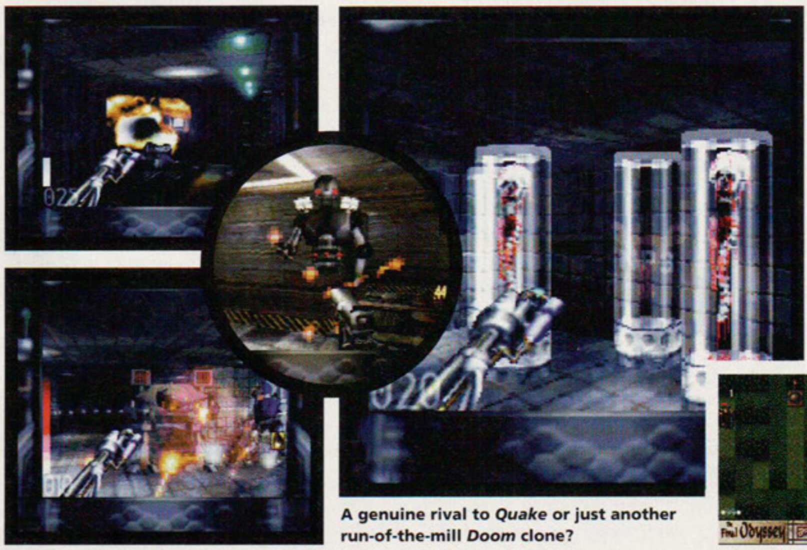




A PIC chip. With a bent top-right pin. That not very good for it, y'know.

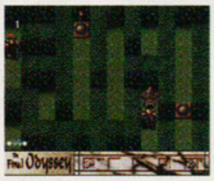


Now you know what Java is all about, find out who might be bringing it to you.



A genuine rival to *Quake* or just another run-of-the-mill *Doom* clone?

AF SCREENPLAY





AMIGA News FORMAT

WHAT'S UP?

AMIGA INC. REVEAL FUTURE

At a specially arranged press conference held on the 15th of May, Jeff Schindler, Amiga Inc.'s CEO, answered the prayers of every Amigan when he revealed that his company were committed to the long term evolution and development of the Amiga platform.

The press briefing, held at London's Novotel the day before the opening of the UK's major Amiga event, the World of Amiga Show, contained more than a few surprises for the journalists who gathered for it, and for the developers and members of the public who attended a repeat briefing later in the day.

With a heavy presence of Gateway top brass, including Jim Collas (Gateway's Senior Vice-President of World Product Development), Jeff unveiled Amiga Inc.'s vision for the future of the platform, which will include brand new hardware running on new processors, hopefully in the next 18 months to two years.



Jeff Schindler was keen to point out that "Classic" Amigas would not be obsolete and would continue in parallel development.

CONVERGENCE

The future machine will run on a radically redesigned OS and will feature a completely new processor at its heart, while maintaining full backward compatibility.

However, Amiga Inc.'s plans for the platform are not merely as a low cost, powerful home computer, but as a whole range of products. As more and more consumer electronics items become computerised, they believe there is a real market in licensing their technology to other manufacturers, and at the same time ensuring compatibility between various different devices. Not only will your home computer be powered by Amiga, but your microwave, mobile phone and central heating may be too!

> *"The future machine will run on a radically redesigned OS and will feature a completely new processor at its heart…"*

Although Amiga Inc. weren't releasing too many details on the specifics of the future hardware, they were keen to point out some of its particular specifications.

They claim some fantastic graphics abilities, including the ability to manipulate 400 megapixels a second in full 3D and handle four broadcast quality MPEG audio streams at once.

The audio side hasn't been as well developed but a Dolby AC-3 standard system (six channel digital surround sound) will form the basis of it.

Essentially, it will be jolly fast and good, about five times faster than anything currently available.

BRIDGE SYSTEM

Two years is a long time. While in subsequent statements Amiga Inc. suggested continuing support for what they now like to call the "Classic" Amiga, developers really need some machines to start creating software for the next generation Amiga. Amiga Inc. plan to have development machines, with a prototype operating system, ready for the Cologne show in November this year.

The hardware will be based on a PC platform, which is currently the only system that has the kind of hardware components needed to develop for the new Amiga, such as high-power 3D accelerators and DVD solutions.

Although intended for developers, they will be available to everyone. After an adverse reaction to the initial announcement, Amiga Inc. were keen to stress that the future Amiga would NOT be a PC, or even use an Intel processor. This was merely a platform that would permit development.

As Schindler put it: "The first Amiga wasn't designed on an Amiga, and the next one won't be either."

SCHINDLER'S HISSED

There was some good natured hissing when part of Amiga CEO Jeff Schindlers's press-conference presentation, running on a PC portable, crashed and refused to restart. "Obviously I'm running on an inferior operating system," quipped Schindler as he gamely proceeded.

Although he received some ribbing for using a PC in the first place, it was later pointed out that no Amiga alternative was available – yet.

Specific details about the interim version of the OS, which will be shipped with the "November boxes" as they have been popularly dubbed, remained quite vague in order to prevent prejudicing pending deals.

Various alternatives were touted, but the bookies' favourite seems to be BeOS, with the added implementation of a JAVA Virtual Machine environment to help with cross-platform portability.

PPC developers bury hatchets

In a joint announcement after the recent World of Amiga show in London, and as a reaction to the plans revealed by Amiga Inc., Haage & Partner and phase 5 Digital Products have emphasised their full and continued support for the PowerPC integration.

With joint efforts, both vendors will further support the developers and the users of PowerPC technology, and will ensure a fast-growing number of stunning and powerful applications. With many thousands of PowerUP boards being shipped so far and the number of installed systems rapidly growing, the PowerUP boards already provide an attractive market for all developers.

This fact is underscored by many upcoming PowerUP releases of major Amiga software packages, and by the increasing support of software vendors which was agreed during the WoA, even after the announcements of Amiga Inc.

Haage & Partner and phase 5 emphasised that the competition of their different approaches towards PowerPC integration, as well as the public dispute about this, were in the past.

"We will ensure that users of the PowerUP system have a transparent integration of their PowerPC software and will see a rich variety of the most powerful applications released soon," said representatives of both companies. Further development of PowerPC system software will be done with close consultations between the companies. Apart from that, co-operation in the development of powerful PowerPC-based system libraries and other OS extensions are being discussed.

During meetings between senior figures of Haage & Partner and phase 5 with Amiga Inc. during the WoA show, it was agreed that a new proposal will be presented to Amiga Inc. which outlines an alternative option to the Amiga "Bridge" system already planned. This alternative is a new PowerPC-based system, which will feature the planned Amiga OS upgrade and will be available by the end of the year.

As well as incorporating standard industry components and interfaces, such a system could provide further choices for creative development and expansion in the spirit of the Amiga, and could also run the current and next releases of AmigaOS.

Based on the PowerPC, this system would provide continuity and innovation for all users and developers, and would allow the Amiga community to take part in developments like Motorola's new AltiVec technology, an extension to the G4 PowerPC processors which are expected to be released early next year. Essentially, PowerPC developments are likely to provide the most powerful Amigas in the world up until the launch of the next generation Amiga.

With the approval and support of Amiga Inc., this technology could introduce the long-awaited revival of the Amiga platform, quickly providing a growing market of powerful systems which users could buy, and for which developers could develop and sell software and add-ons.

In a press release issued jointly by Haage & Partner and phase 5, they urged anyone who is interested in developing PPC applications to step forward and publicly commit themselves to this course, believing that is the best way to bolster public confidence in this technology. *Amiga Format* would certainly be interested in hearing from you too.

Your Questions answered...

There have been all sorts of wild statements flying around the Internet about what the changes will mean for Amiga users. We aim to give you a definitive guide to the future of the Amiga with this handy look at the most commonly asked questions.

WHAT ABOUT MY CURRENT AMIGA?

• It still works, it will continue to work and there will be new software for it. Your current investment in Amiga technology is still as safe as it would be in any other circumstances.

Also, remember that Amiga Inc. are being forced into taking a huge leap forwards in order to bring the Amiga back to the forefront of the technology race as there has been little or no first party development of the Amiga range since 1993.

While some of the more proprietary pieces of your hardware might not work with the new Amiga, or even the bridge machine if you get one, your software collection should be safe.

WILL ALL THE FUTURE AMIGAS BE BASED ON PCS?

• No, they won't. Only the developer bridge machine will be PC-based. If you want to buy one of these machines, which are currently being called "November Boxes" by Internet folk then you will be able to.

• The Amiga/PC bridge machine will be running a prototype version of OS 5.0, the one that Amiga Inc. called OS 4.0 at the press conference. This OS will be solely a beta version and will have new APIs and devices added as development progresses, until it becomes stable enough to be called OS 5.0 when it will be released properly.

• Developers will be able to ensure full Classic Amiga compatibility thanks to Mick Tinker's Inside Out PCI card, which is basically a complete '040/'060-powered Amiga, together with a version of Siamese Systems' Siamese software. Together, this will provide the fastest ever Amiga to date.

• The reason that the x86 platform was chosen for the development of OS 5.0 and other software for the new machine is threefold. Firstly, most developers already have PCs in their possession, making the outlay for developing for the new Amiga as small as possible.

Secondly, the development tools for the new chipset, and the emulation for the new chipset, is currently already based on x86, not on PowerPC or any other processor.

Thirdly, as we all know, PCs are very cheap to buy and offer things like 3D graphics cards which will be used to "pretend" to be the new Amiga hardware (although much slower).

WHAT ABOUT MY BRAND NEW POWERPC BOARD I SPENT A FORTUNE ON?

• As the weekend progressed, the news about the PowerPC got better and better. Sources close to phase 5 and Amiga Inc. told *Amiga Format* that the reason the PPC was completely omitted from Amiga Inc.'s original statement was because of a lack of understanding between the two companies.

However, as Saturday turned into Sunday and talks were held among developers and other interested parties, it emerged that the PowerPC market for Amigans was now more stable than ever, thanks to a deal agreed between Haage & Partner and phase 5 where H&P will supply the software for phase 5's accelerators. Now the Classic Amiga range will evolve into a PowerPC platform with 68K emulation and there should be G3 or G4-based accelerators available by the start of next year.



Even *Wired* got in on the act with their stories about the rebirth of the Amiga.

Although unconfirmed at the time of going to press, there were indications that a new version of Workbench, designed for PowerPC and 68K, would soon appear for the Classic Amiga.

SO WHAT ABOUT WORKBENCH 3.5 THAT WE WERE PROMISED?

• When Amiga Inc. first announced a new version of the OS called 3.5 they hadn't really looked into it in great depth. As they explored the ways to improve the Amiga's operating system it was found that a lot of the features they wanted to add were already supplied by many of the third party commodities, hacks and add-ons that were available.

They effectively dropped the idea, but with the announcement of the direction that the Amiga would take over the next year, the phase 5/Haage & Partner/Access axis discussed the possibility with Amiga Inc. of them writing Workbench 3.5.

Amiga Inc. have tentatively promised to hand over the source code for Workbench 3.1 to Haage & Partner for recompilation for PPC and to have the additions made to it that were discussed by Amiga Inc.'s previous OS team.

As we go to press there hasn't been any official announcement on this, so things might well change by the next issue of *Amiga Format*.

Continued overleaf ➡

AAA Awards

Many people hadn't heard of the AAA awards until the first winner was announced at the recent World Of Amiga show. The awards are intended to recognise outstanding achievement in the Amiga industry, with candidates being nominated by the user community.

Darreck Lisle, Jason Compton, Mick Tinker, Kermit Woodall and three representatives from user groups around the world made up the judging panel, with the extremely difficult task of deciding upon a winner.

The final nominees were phase 5, Holger Kruse and Urban Müller, and the winner was… dum de de dum dum da-daah: Holger Kruse!

Although Petro made it sound like Holger had single-handedly invented the Internet, the author of Miami graciously accepted the award on behalf of "everyone who has made the Internet more accessible to Amiga users".





News of the award spread fast over the Net, even as the modest Holger Kruse held aloft his glass ball.

New games news!

The World of Amiga show turned out to be a great one for Amiga gamers, with four long-awaited releases finally turning up in time for the event. *Quake, Genetic Species, Foundation* and *Virtual Karting 2* were all available from stands like Weird Science and Epic and were selling very well, with *Genetic Species* being shown on the Amiga International stand, *Foundation* on Sadeness' and *Quake* being played on *CU's* stand.

Based on what we were told by stand owners, it looks like *Genetic Species* was the most popular of the titles at the show, closely followed by *Foundation,* with *Quake* and *Virtual Karting 2* bringing up the rear. However, Weird Science told us that they had a huge number of back orders for *Quake* that had built up over the months when people were still waiting for the game to be released.

In addition to these new titles, Epic had a very good show, selling a new re-release in the shape of *Worms: The Director's Cut.* This game originally scored a 90% mark when it was first reviewed in *Amiga Format.* Look out for the review of the re-release in next month's *AF* to see how it's stood the test of time.

What's more, *Amiga Format* was inundated with new games from new games development teams from around the world at the show, indicating that the Amiga is far from being obsolete as a games platform, and we garnered much interest with our exclusive demo of *Napalm* on show at our stand. Indications are that there was also a PowerPC version of *Quake* doing the rounds at the show – not, we hasten to add, an official one from clickBOOM, but probably one from the same group that originally launched the game onto the Amiga two years ago. Watch out for more details in upcoming issues.



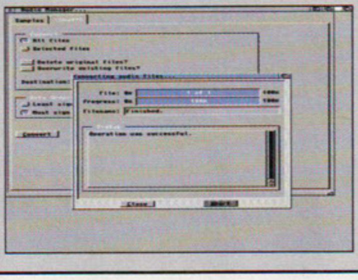
Genetic Species: A great demo meant great sales at the WoA show!

MasterISO winners!

These five lucky people won themselves a copy of *MasterISO 2,* reviewed this month on p.62:

S. White, St. Andrews, Scotland.
Mr. A Woods, Helston, Cornwall.
Mr A Beverley, Stockport, Cheshire.
Efstathios Varvatos, Athens, Greece.
W. Schaaÿ, Den Helder, Netherlands.

Your copies of *MasterISO 2* will be winging their way to you shortly so happy burning!



Sing the Amiga's praises!

Opera, a multi-platform Web browser, is to come to the Amiga. This alternative to Internet Explorer and Netscape on the PC and Mac isn't nearly as well-known as its more famous competitors and, indeed, Opera isn't even doing as well as iBrowse on the Net right now. However, it does promise to bring cross-platform browsing to Amiga owners desperate for a decent implementation of JavaScript ahead of the game.

The Norwegian authors of Opera for other systems called this "Project Magic" in an attempt to garner support from systems other than the PC and got the best response from Linux users around the world. As a result, they decided to write a version of Opera for these people and debated whether an Amiga version would also be worthwhile.

With an overwhelming response to the plea they put on their Website looking for Amigans who would be interested in another browser, they swiftly decided that an Amiga version would be worth their while, notwithstanding the fact that the Amiga already has at least two outstanding web browsers in the shape of iBrowse and Voyager.

In any case, Amiga development of Opera is now underway and is being overseen by Tim Corringham of RamJam Consultants, a long-standing Amiga supporting company. To find out more, you can call RamJam on 0118 946 5940 or visit their website using your existing browser at http://www.ramjam.demon.co.uk

AF Net Corner

Having wowed people at the World of Amiga show with their announcement of the new Amiga, Amiga Inc. also pleased Net users who'd bemoaned the lack of a Website for ages by announcing their new site, which can be found at http://www.amiga.com.

The site is nicely laid out and makes subtle use of JavaScript, without alienating those who don't have that facility, which, let's face it, is actually most Amiga owners.

Amiga Inc. promises to have all the news surrounding their new project up on the Website as and when it happens so, like Amiga.org and the Amiga Web Directory, this site will no doubt become a regular stopping off point for interested Amigans when they pick up their mail each day.

You can also visit this site by going to the original http://www.amigainc.com URL.



A detailed and good-looking Website, as befits the owners of the Amiga.

THE WORLD OF AMIGA



Simon Goodwin reports from the premier Amiga Show at the Hammersmith Novotel.

On May 15th, on the eve of the World of Amiga show, Amiga Inc. held a special press briefing. The announcements they made may have had some bearing on the matter but the fact was that it was the best UK show for some years, in terms of business transacted, products released, news gathered and probably beer drunk. We told you it would be good. If you missed it, here's the next best thing...

The early bird on the Saturday the WOA98 show opened might have been a bit miffed to find there was already quite a queue outside. Although it was expected that attendance would be somewhat down from last year (and it is still too early to tell exactly how many people were there), if there were fewer people, they were certainly keen to get in.

Manoeuvring past the surly hotel employees, the happy few entered the hotel's former underground car park to find it was actually just as full of exhibitors as it was last year.

Wandering around the show in search of a bargain or just a bit of advice, the lucky traveller might have happened upon some of the following venues:



BLITTERSOFT

Blittersoft tempted many Amigans with the latest Kickstart, with 32-bit Workbench 3.1 ROMs at £30 a pair. They sold out of Preludes and a mountain of Concerto add-ons for Picasso IV. That prince of Zorro graphics cards was a snip at £220 and the latest releases of *Fusion* and *PCX* were up for grabs at the minimal-risk price of just £25. Given the earlier announcements by Gateway, it was also rather surprising (at least to them) that all of the exhibitors who had stocks of PPC accelerators were sold out by Sunday.

POWER COMPUTING

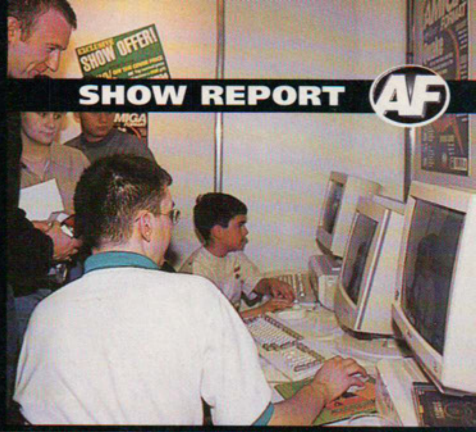
Power Computing had the usual range of accelerators, drives and ROMs at aggressive prices, plus the latest scandoubler from DCE in Germany.

This does a good job of running PAL and NTSC video on a VGA monitor, but scrambles the display in resolutions standard on other platforms, like Super72 (800 by 600) and HighGfx (1024 by 768 pixels).

The cheapest PowerVision is a scandoubler, which allows 31KHz lines but does not eliminate the evil intrusion of interlace flicker. The £100 version is far more useful for serious work as it allows 724 by 576 displays without the usual flicker on PAL interlace.

MicroniK also sell internal and external scandoublers, but the one to watch is probably Wizard's forthcoming model, which missed the show but promises support for more modes, including Super72.

Continued overleaf ➡







Busy (above and top) was the order of the day. The only lull in activity was during the FA Cup final, which some exhibitors took time off for as well.

Petro's dancing girls and boy, Annex (below and bottom) put on a well choreographed performance to accompany the Amiga "theme tune", even on the sadly uneven stage that had been erected for them.

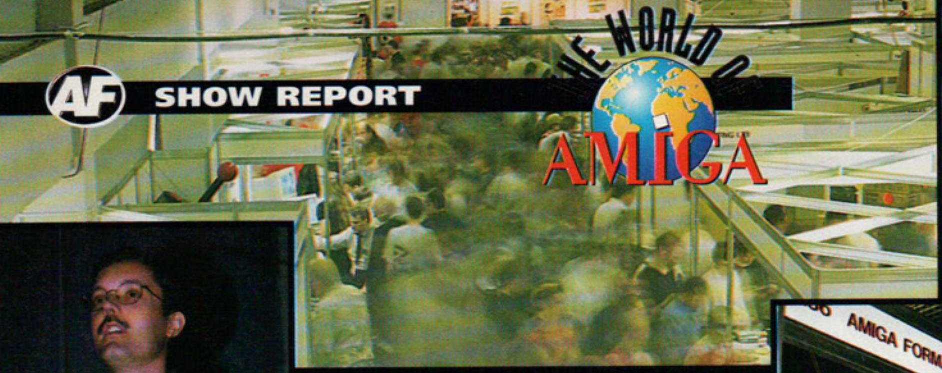








THE WORLD OF AMIGA









Allan Havemose (left) Amiga Inc.'s head of development, had an evangelistic gleam in his eye all weekend as he described plans for the new Amiga to developers and other interested parties.







People of all ages, including Erik (above), flocked to the *AF* stand to see some of the software we were displaying, including *Napalm*, *Quake*, *Genetic Species* and special demonstrations of *Photogenics NG* by Paul Nolan.

Some very clever people were at our stand. Most of them asked Nick Veitch (above) tricky questions. Meanwhile, there's no question as to how happy Holger Kruse (above right) was to pick up the first AAA award for Miami.

LOCAL COLOUR

Gasteiner and Golden Image shared their usual swan's nest, piled high with Amiga electrickery, including £79 Zip drives, 33MHz FPUs at just £8 and SIMMs in any size you liked at £1 per megabyte. They deviated from the Amiga brief to sell electric eye massagers and to watch the FA Cup final.

Rather more eyes were diverted when Petro Tyschtschenko's dancing girls (and a token bloke), Annex, put on energetic displays of the routine that accompanies his unlikely disco debut, the *Back for the Future* dance CD.

> "Even on a humble 68K system, ACT's 16 track, 16-bit stereo drum demo sounded impressive…"

Signed copies, stickers, pens, mouse mats, posters and other Amiga memorabilia were doled out by Petro's scary sidekick on the official Amiga International stand, yet more proof that the marketing operation once again has a budget to burn.

Perhaps not surprisingly, the Annex CD autographing session was probably the largest single cause of congestion in a show where most aisles were bumper to bumper much of the time. Future US fashions (perhaps) were presaged by Boing Shoes, sported by Kermit Woodall and AI's Joe Torre.

CONFERENCES

The real future of the Amiga was mapped out in a series of presentations in the conference rooms above the show hall, with daily confidential briefings from the US Amiga contingent for trade and developers, and wide-ranging seminars organised by AmigaSOC throughout the day.

Don Cox made a plea for a 'clutter free' user interface design, showing some impressive graphics and audio packages in action, designs for future GUI arrangements and hand-drawn animations that proved the fine results real artists can achieve by drawing freehand with a mouse.

Prolific hardware embedder Mick Tinker of Index Innovation showed off his licensed Amiga clones, underlined by a *Scala* presentation running from an Access Amiga in a stubby micro tower the size of three 5.25" drive bays. Overseas orders for his products are running at 5,000 per year for Italy and 7,000 for Canada, with 5,000 *Scala*-based presentation systems to be installed across the USA.

A pilot batch of 500 machines, with MPEG expansion hardware, is set for delivery to UK national lottery contractors Camelot, with the prospect of thousands more being shipped to sit on top of every lottery terminal. They will be showing the local winners and the results of lottery finding in each region. It can't be you I'm afraid – Mick beat you to it.

BOXING CLEVER

A brilliant presentation revealed many of the innovative features of the forthcoming BoXeR, shaping up to be the 'super Amiga' that Escom never delivered. It's currently limited to a gigabyte of memory, with 2Gb of SIMMs supported when chip manufacturers catch up with Index's innovations. "We thought [Commodore's] 16Mb limit was a bit small," Mick opined.

The BoXeR can be configured for clock rates from 25MHz to 75MHz without changing components, with a 100MHz option planned "at some point".

Most importantly, the motherboard uses 68040 signals throughout, capable of fast 128-bit bursts rather than the 8/16/32-bit asynchronous bus that holds back all Commodore and Escom Amigas.

Almost 2,000 gates in the custom chip are used to convert the modern signals into the old format required by Buster, the Commodore Zorro II and Zorro III controller chip.

Buster uses about 2,000 gates itself, one 25th of the capacity of BoXeR's main PLD. A shortage of Busters has prompted Index to consider building Zorro control into their own chip, eliminating a bottleneck and boosting



Kermit Woodall (left) animatedly demonstrates *ImageFX3*. Amiga Inc.'s impression of a new Amiga system (right) seems good. Let's hope it's not a hollow promise (below)!









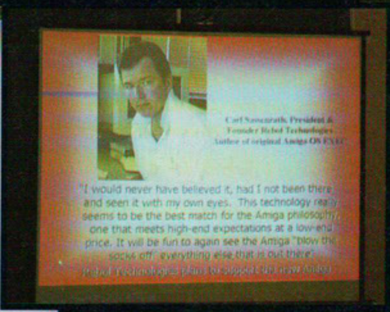


The AmigaSOC guys (above) were on hand giving help and advice, and running most of the seminars. The HiSoft stand (top right) did good business on Internet-related software.









Is this the largest Joystick in the world?(above) Either way, there were plenty of smaller ones to choose from. Carl Sassenrath (above right) couldn't appear in person, but did appear by way of an old photo, lending his support to Amiga Inc.

Jim Collas (above) was just one of the influential Gateway figures (he's Snr. VP of product development) attending, lending credibility to the idea that Gateway take the Amiga very seriously indeed. Some serious sounds (above right) were also emanating from the Atlantis DSP soundcard.

performance on Zorro III cards held back by Dave Haynie's old compromise bus controller, originally designed for the venerable A3000.

However, careful testing will be needed to ensure full compatibility with existing Zorro cards. So far, the only firm with a Buster replacement on the market is MicroniK and their implementation is reliable but actually slower than the Haynie design.

The most amazing thing about BoXeR, shared by the Inside Out board which will feature in AI's 'interim solution' developer boxes, is the way that programmers can literally rewire the custom logic between one reset and the next. This is done by updating the schematic logic program in the 2Mb flash ROM which also holds Workbench 3.1, the CD file system and 64-bit trackdisk extensions.

One application for this logic is a true hardware emulation of AKIKO, the CD^{32} chunky to planar chip, although the need for this is not as great as it once was. Another possibility, discussed by Mick and *Photogenics* guru Paul Nolan, is the direct hardware implementation of graphical effects such as transparency, which otherwise consume a lot of time and CPU power.

The Flex logic can also implement DMA channels, moving data around without processor intervention. This boosts IDE drive performance dramatically and pushes compatibility of the in-line ISA slots beyond the rather basic Golden Gate 2 specification.

DOUBLE ACT

Marc Albrecht and Thomas Wenzel of ACT fought a losing battle with PPC installation in the ICOA A4000T. They were unable to demonstrate the beta PowerUp version of *Samplitude* at the show. It's still in a pre-release state, but is expected to be on sale this summer.

Even on a humble 68K system, ACT's 16-track, 16-bit stereo drum demo sounded impressive, especially on the Prelude-based system on the Amiga International stand.

However, the real ear-tickers were *Samplitude*'s de-noising and convolution DSP effects. The convolution effect is hard to describe but is impressive once heard. It analyses the acoustic of real or simulated rooms, adding convincing reverberation and filter characteristics to other samples.

Mains hum and high pitched whines, like video monitor whistle, were banished by *Samplitude*'s de-noiser, which takes a 'sound print' of the unwanted noise and subtracts it algorithmically from the corrupted sample, leaving a crystal clear output with absolutely no trace of the interference.

This is the sort of effect that you have to hear to believe and is vindication for the idea of seminars accompanying the barrage of demos in the noisy main hall.

Marc also waxed lyrical about ARTAS, the AHI-extension which promises to do for data streams what datatypes do for one-off sounds and graphics (see boxout).

ARTAS

WoA saw the launch of ARTAS, a free extension to AHI developed by Marc Albrecht and Martin Blom. ARTAS is not limited to audio, though that will be its first application. It is potentially useful for MPEG, animations, networking and any system that works on streams of data.

ARTAS can be compared with datatypes except it works on continuous streams rather than single samples or images.

You can plug in filters, and synchronise or divert streams, making it ideal for systems with DSPs, codecs, multiple displays or sound cards. Preferences for each application are saved automatically.

Output can be directed to MIDI, networks or disk, with a direct interface to *MakeCD*. ARTAS can use AHI drivers or an improved (full duplex) Tocatta driver, with Concierto and Silicon Studio drivers in the works.

INDIVIDUAL COMPUTERS

The one and only model of Jens Schoenfeld's innovative DSP sound unit Atlantis popped up beside its beaming designer on the Power Computing stand. Bizarrely, this product from the CatWeasel developer connects to the Amiga floppy port or a custom connector on CatWeasel or Buddha, feeding serial data from Paula into a fast Motorola DSP which expands 128kbit

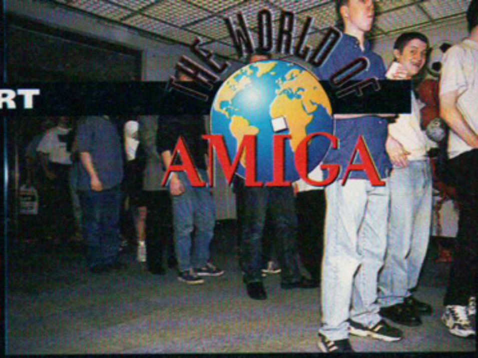
Continued overleaf ➡

Petro grabbed every opportunity to make a speech about how long he'd been in the Amiga market (below), while the gentlemen of the press (right) took down every word...











The crowds queued for admittance (above), and by the second evening all the old battles had been forgotten as Joe Torre, Wolf Dietrich and Jürgen Haage posed for a picture (above right). Some of the best work was done while sitting around a table in the Novotel's execrable bar (right).






Petro spent loads of time at the show autographing stickers and CDs for people (above left). The Siamese stand was always popular (above) and the seminars (right) had a mixed attendance, but everyone agreed they were really worthwhile.

A selection of the world's Amiga press were on hand to gather information, some using trendy digital cameras like Thomas Svenson of Sweden's *Amiga Info* (above right), while others used more traditional news-gathering means.

compressed MPEG audio into 16-bit stereo! The prototype is huge by Schoenfeld's usual standards but production units should be slimmed down to the dimensions of a fag packet and accelerated to support the proprietary MPEG layer 3 format, as well as ISO standard layer 1 and layer 2 compression.

Schoenfeld's other invention is Kylwalda, named after the frog assistant of the eighties cartoon wizard Catweazle (here spelt correctly!). It's a bit hard to know what use this will be without doing a full review, but suffice to say it allows you to connect two disk controllers, say CatWeasel and Paula, to a single floppy drive made for a PC, for the ultimate in speed and compatibility.

> "...the Cybervision PPC hardware design is finished... However, the Amiga software still needs some work..."

CYBERVISION – ALMOST

phase 5's demonstration of the 'very early prototype' of their CyberVision PPC turned out to be more, and less, than it seemed. The demo wasn't even running on a genuine Amiga card but on an Apple GREX 3D, via the unreleased PCI bridge for PowerUp accelerators.

Wolf Dietrich promised delivery of the real thing 'at the end of June', blaming the delay on long lead times for two vital components.

Wolf insists that the CyberVision PPC hardware design is finished (which begs the question, "Why didn't they bring a working prototype then?"), and the GREX card is 'functionally the same'. However, the Amiga software still needs some work, as of mid-May.

This was both encouraging and discouraging. The existence of a working PCI bridge is tantalising, with the abundance of cheap, high-performance PCI cards in retail now, but the lack of genuine Amiga hardware and drivers gives cause for concern, especially so near to the delayed launch date.

Given the later announcements about the direction of PPC development in the coming years, phase 5 also have a lot more on their plate than they expected. Meanwhile, they are not the only people with cheap PC cards hooked up to a much-expanded Amiga core...

WIZARD HOSTS

Although not developers themselves, the Wizard stand was host to some international developers who had flown in especially for the show.

Greg Perry from GPSoft was demonstrating Directory Opus, and giving some people a few clues as to what might be in the next version (see our special preview on page 54).

Also on the Wizard stand, Kermit Woodall of Nova Design ended up giving some rather animated (in both senses of the word) displays of the latest version of *ImageFX*. All of the "undesirable misfunctions" we discussed in our review last issue have now been corrected and many people found themselves stopped in their tracks by the impressive results on display.

MICRONIK BRIDGE

MicroniK ran a slideshow on their PCI bridge, which gives Amiga programs direct access to PCI cards. This is a big step forward from their original PCI implementation which was cut off from the Amiga and only accessible to other PCI cards, such as a plug-in Pentium board.

The snag is that the adaptor runs at a rate synchronised with Zorro II, rather than the full 33MHz PCI rate. This means that the bridge only works with cards that can drag their heels without tripping up.

The full-colour slides looked good but appeared quite slowly, wiped onto the screen at a rate of about one per second. MicroniK still have no Amiga drivers so the demo was bypassing the operating system, writing directly to the card. It will need a full RTG implementation before the promise of this bridge can be realised.

ATEO EXPANSION

The French team from ATEO Concepts had almost exactly the opposite problem. Their PC-compatible expansion slots run faster than typical PC cards, so again you need to sift through the available hardware to find compatible boards. This time only the fastest ISA cards, rather than the slowest PCI ones, managed to fit the bill!

ATEO's Pixel 64 is fully working and Amiga compatible, thanks to Picasso96 drivers which deliver a full 256-colour Workbench in higher resolution, at around the speed of an accelerated AGA system in eight-colour Productivity mode.

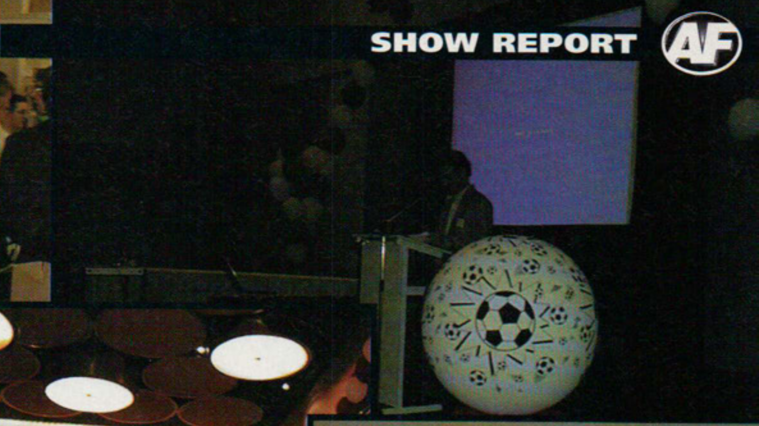
The claimed top speed of the ATEO slots is 9Mb per second, more than twice the official limit for ISA cards, but Aminet's *BusTest* rated the card at about half this in practice – mid-way between the speed of existing Zorro II and Zorro III cards. Indeed, the display chip comes from the same range used in Picasso boards and falls between the specification of the Picasso 2+ and Picasso IV components.

ATEO's graphics solution uses a Cirrus Logic GD5434 display chip with 2Mb of 64-bit memory and a 135MHz pixel clock. This allows resolutions of up to 800 by 600 pixels in 24-bit True Colour, 1024 by 768 in 16-bit colour and 1280 by 1024 in 256 colours, all at high refresh rates that minimise flicker.

There are some limitations – you must have an accelerator with 32-bit memory to use ATEO expansion as it maps hardware into the 24-bit Zorro II address space, clashing with PCMCIA




Our very own Ian Jones (left) takes a sandwich break while the Annex girls (above) signed CDs and whatever else the Amigan punters had to hand. Fnarr, fnarr... Sorry. Must keep calm...







The head honchos (above) – Petro Tyschtschenko (head of Amiga Int.), Jim Collas (senior VP product development, Gateway), Allan Havemose (head of development, Amiga Inc.), Jeff Schindler (MD, Amiga Inc.) and Steve Johns from Gateway, who just likes to be included.

The public announcement was somewhat modified from the press-only statement given in the morning, but Fleecy Moss (above right, standing) still had a hard time explaining what was going on to developers on Saturday morning.

boards and cheap expansions of up to 8Mb.

If your A1200 accelerator supports more than 8Mb RAM and it has true 32-bit addressing then it will be compatible with ATEO.

The ATEO slots use ISA connectors but the increased speed means that you can't just plug in any ISA card and expect it to work. So far only the Pixel 64 has drivers, but the developers are working on code for multi-IO cards and network adaptors. There's no DMA controller so SCSI and sound cards are unlikely.

ATEO's solution really works and deserves consideration if you're towering up an A1200. At £200 it's competitive with Zorro II and much cheaper than Zorro III expansion, but its future hangs on the availability of driver software and compatible ISA cards.

Pixel 64 is a good start, delivering ISA graphics which the Golden Gate 2 bridge never managed. With Ethernet and Multi IO drivers in the works, it's got a lot of potential.

COYOTE BARKS

CoyoteSound is a Scandinavian rival for *SoundProbe*. It is a bargain basement non-linear hard disk editing system, written in 100% machine code for three types of Motorola processor and is priced at just $15. Using a standard multi-window Workbench interface and disk to disk editing means crashes do not destroy pre-existing files.

CoyoteSound performance claims are literally incredible, with 'true 16-bit' stereo output at 32KHz on an A500+, 60KHz sample output at 14-bit resolution and 'much higher' with a multiscan monitor. This boosts the rate of audio DMA as a side effect of the faster display scanning.

CoyoteSound does not use AHI which it describes as 'far too slow', but it does have direct support for the Delfina sound card, as well as the standard Paula outputs. Digital filter and time domain effects can use the Amiga's 68K processor, phase 5 Power PCs or a Motorola 56K DSP.

Samples can have 4, 8 or 16-bit resolution in RAW, 8SVX and AIFF formats. The minimum specification is an Amiga with Kickstart 2.04, 1 Mb chip, and 1 Mb fast RAM. We're looking forward to receiving out review copy. If you're gagging to know more, ring Coyote Flux on 0031 365 334 238.

NO PLACE LIKE HOME

Of course, there was one stand which wasn't selling any software or hardware, had no dancing girls or free drinks and still drew quite a crowd.

The *Amiga Format* stand did feature some very nice chaps who spent most of their time answering people's questions about everything from AmigaDos to Zip disks.

It was also the place where you could have compared *Quake* to *Genetic species* (running side by side), had a go on the upcoming *Napalm* and signed up for a money off subscription (which many of you did). Nick even generously discounted the price of the current issue on sale at the show – by four pence, and only then because the till had run out of pennies...

The stand also became a temporary home for Paul Nolan and his rather large Heath Robinson-style Amiga tower (I've never seen a floppy drive mounted *there* before), on which he was giving very impressive demonstrations of what could be done, though surely he must have drawn that picture a thousand times by now. Paul also did some seminars, which proved to be some of the most popular of the show.

THIS IS THE END

All good things, apart from the Amiga, must come to an end, and so it was that on Sunday the show came to a close.

With all the announcements and hasty clarifications from Amiga Inc., the spectacle of six people trying to put on a dance show on a very small stage backed up by a CD player which was less reliable than the one we use in the *AF* office, the amazing innovativeness of many of the developers and the good natured discussions between reviewers and reviewed in the late night bars, it all seemed to have gone on for a lot longer than just a few days.

Maybe there were a few less people than last time but it didn't seem like it. We spoke to several people, ordinary users, who travelled far and wide just to be there. One chap arrived on a Saturday morning flight from New Jersey and was returning on the Sunday morning, having flown in just for the show. He wasn't wealthy or anything, it was his birthday and his parents had arranged it as a present. I'm sure there were many more like him who made such a great effort to get there, and continued making the effort by talking to the developers and distributors at the show – you'd be surprised just how much difference it makes to them to get face to face feedback from real users.

> "One chap arrived on a Saturday morning flight from New Jersey... having flown in just for the show."

It was a spectacular event and one which took up a great deal of time and effort on behalf of the exhibitors and organisers (thanks Peter and Nora!).

However, at the end of the day it isn't the venue, the date or the individual stands which make the show – it's the people who visit it.

Many thanks for your interesting questions and comments if you did attend and, either way, we all hope to have the opportunity of seeing you next time.

Eyetech's Summer Sizzlers: Amiga CDWriters & s/w from £279.95; Buffered i/f & s/w from £24.95; A1200 3.1 ROM/Disk sets £39.95; Digital cameras with PSU, LCD screen, SmartMedia card & Amiga s/w £349.95; Siamese RTG2.5 ethernet packs £189.95; Amiga DigiCam s/w - £39.95; DIY EZ-Towers from £79.95; 20xCDPlus-SE - £99.95; 030/33 accel's from £49.95, w/4MB - £59.95; Amiga trackball £14.95!!!

(New) AMIGA HEALTH WARNING

"A buffered IDE interface is essential to avoid overloading of the A1200's IDE port when adding extra devices"- John Kennedy - AF - 7/97

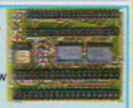
Don't be tempted to skimp. Preserve your Amigas health with IDE technology from Eyetech - *THE* IDE specialists. The Eyetech *EZCD-Mk4* fully buffered 4-device interface *with active IRQ pull-up* (AIPU) for high performance A1200 systems is now available.
For less-exacting systems our economy interface - the *EZCD-SE* - is available for *just £24.95 including licenced CDROM driver software* - see below. Its a small price to pay to preserve your Amigas health.

The new EZCD-Mk4 High Performance 4-device buffered interface with AIPU from Eyetech -Just £39.95

- √ High performance active interrupt control circuitry essential for highly expanded and/or accelerated A1200s.
- √ Comes with fully functional (non-shareware) CDROM s/w

EZCD-Mk4 and CDROM software	*- just*	*£39.95*
EZCD-Mk4, CDROM s/w with 3x40 way and 13cm 44-way cables		*£49.95*
EZCD-Mk4 with full EZ-IDE s/w and 40- & 44-way cables		*£59.95*

The new EZCD-SE economy 4-device buffered interface from Eyetech -Just £24.95



- √ Suitable for most medium performance A1200 systems.
- √ Comes with fully functional (non-shareware) CDROM s/w
- √ Trade up to EZCD-Mk4 i/f at full buying price (less carriage) within 30 days (if required).

EZCD-SE and CDROM software	*- just*	*£24.95*
EZCD-SE, CDROM s/w with 3x40 way and 13cm 44-way cables		*£34.95*
EZCD-Mk4 with full EZ-IDE s/w and 40- & 44-way cables		*£49.95*

Amiga Digital Camera Software

(from the author of ScanQuix3)



- √ Versions available for most popular models of Kodak, Olympus, Casio, Minolta and Fuji digital cameras.
- √ Picture transfer, camera control & slideshow options.
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- √ Integrates directly with PPaint, DPaint, Pagestream, AdPro, Photogenics & with other programs via Arexx

CamControl software only	*£39.95*
CamControl & PortJnr i/f	*£69.95*

Amiga 1200 Magic Packs



- Direct to Eyetech from Amiga International Inc.

- √ Full UK specification with Kickstart 3.1/Workbench 3.1 disks and manuals, UK psu, mouse, mousemat and TV lead and 2MB graphics memory (in addition to any memory expansion included in the packs below).
- √ Fantastic software bundle including Wordworth 4SE,Turbocalc 3.5, Datastore 1.1, Photogenics 1.2SE, Personal Paint 6.4, Organiser 1.1, Pinball Mania and Whizz
- √ Hard drive versions come with Scala MM300 preinstalled
- √ Other options available - please ring. EZ-Tower options also available from £349.95

Eyetech Starter Pack

Diskette based system as above
Add an '030/33/MMU/FPU with 8MB for just £79.95 and/or a170MB HD for just £60.00
Just £189.95

Productivity Pack 2

170 MB hard drive system with software preinstalled 030/33/MMU/FPU with 8MB
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1.7GB hard drive - 20-speed CDROM - '040/25 accelerator & 16MB - EZCD4 buffered i/f - EZ-IDE s/w - MiniTower with 230W psu - cables
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Professional Pack 2

Full Eyetech EZ-Tower - EZ-Key i/f - Win95 k/b - 2.1GB HD - 20x CDROM - '040/33 accel & 32MB - EZCD4 buffered i/f - EZ-IDE s/w - cables
Just - £799.95

The *Top-Rated* Eyetech *CDPlus* Range for the A1200

AUI - *97%* *"... It all worked faultlessly..."*
AF - *96%* *"... An absolutely superb bit of kit.."*
AS - *90%* *"... This is a quality product..."*

New! 20-speed CDPlus Systems from just £99.95!!!

The Eyetech CDPlus Range

	CDPlus SE	CDPlus MT/DT	CDPlus Gold
Standard sized mechanism	*Yes*	*Yes*	*Yes*
Dimensions (cm)	*23x15x5*	*42x35x18*	*27x24x6*
Licenced software included	*CDROM*	*CDROM*	*Full EZIDE*
4-device interface	*EZCD-SE*	*EZCD-SE*	*EZCD-Mk4*
Audio out 3.5mm jack	*Yes*	*Yes*	*Yes*
Gold phono audio jacks	*Option*	*No*	*Yes*
PSU type/rating	*20W ext'l*	*230W int'l*	*40W int'l*
PSU capability	*1 x CDROM*	*4 x CD/HD + A1200*	*1 x CDROM + 1 x HD*
Bays for extra HD/FD/CD's	*No*	*5 in total*	*Option (1)*
Upgrade option to 32-speed	*+£20.00*	*+£20.00*	*+£20.00*
Cost with 20-speed mechanism	*£99.95*	*£119.95*	*£149.95*



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CDPlus MiniTower & Desktop systems



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- √ LS120 drive reads and writes standard PC formatted 720KB &1.44MB diskettes and Amiga or PC formatted120MB carts.
- √ In CDROM speed terms,the transfer rate of the Zip is equivalent to about 4-speed and the LS120 to about 1-speed.
- √ EZ-IDE software (or software with equivalent functionality) is required. Get it for just £16.95 (ie over 50% off) with either drive.
- √ **Both Zip and LS120 drives fit in any Amiga/desktop/mini tower/EZ-Tower floppy drive bay or in external case (£9.95)**

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PIC Programming

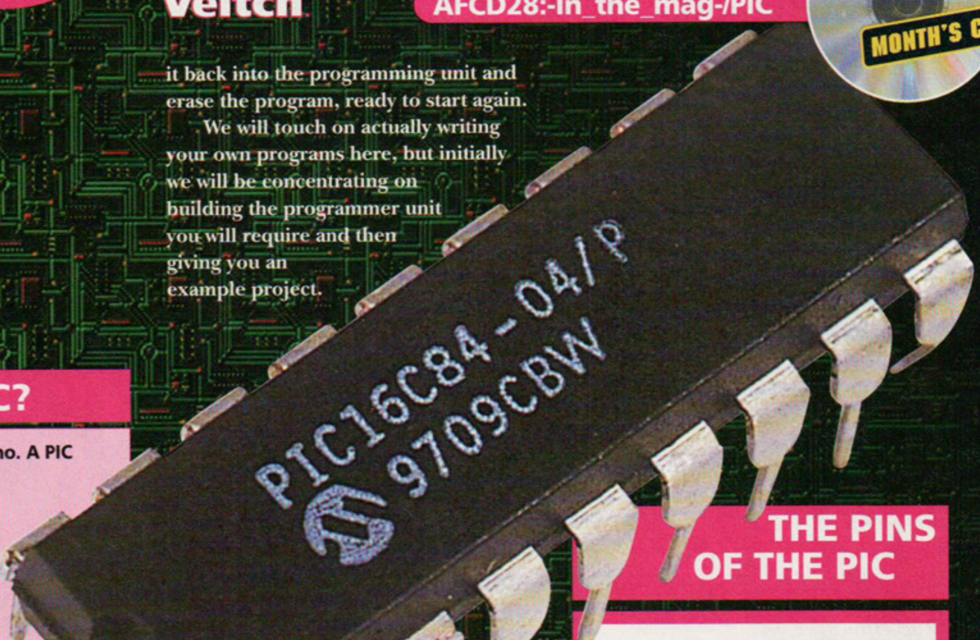
Use your Amiga to program a tiny computer on a chip with **Nick Veitch**

AFCD28:-In_the_mag-/PIC

Microchip produce a wide range of programmable PIC chips, suitable for a range of different applications. The one we will be concentrating on is the PIC 16C84, for the simple reason that it is the only electronically erasable device.

This means that you can program it, and if you make a mistake, or later want to use it for another purpose, simply put it back into the programming unit and erase the program, ready to start again.

We will touch on actually writing your own programs here, but initially we will be concentrating on building the programmer unit you will require and then giving you an example project.



WHAT THE HELL IS A PIC?

A PIC is not an animal with dirt on its nose. Oh, no. A PIC is actually a type of processor, developed by a company called Microchip, for embedded applications and control engineering.

I REPEAT, WHAT IS A PIC?

Well, it's like a little computer. It has a processor, a little bit of on-board memory and a few inputs and outputs, all on a tiny chip. It is really a miniature computer.

SO YOU CAN TYPE IN INSTRUCTIONS AND IT WILL FOLLOW THEM?

Well, you could if you built a circuit to interface a keyboard to it and gave it a program to make sense of what you were typing in. What usually happens is that you write a program for the chip and then save it into its onboard memory. Then the PIC is put into a circuit and it follows the instructions you gave it.

WHAT SORT OF INSTRUCTIONS? DOES IT KNOW BASIC?

No, it uses its own form of machine code or assembly language. It isn't that difficult though, as there are relatively few instructions (35 on the 16C84).

HOW DO I SAVE THE PROGRAM TO THE PIC CHIP?

You need some programming software and a special bit of hardware, which is very like an EPROM programmer. The software is on our CD every month, and on Aminet. The programmer you can either build yourself from the diagram here, or buy from Maplin.

HOW POWERFUL IS IT?

Well, it's essentially a RISC chip and it is capable of running at speeds of up to 5MIPs. That's five times faster than an A500. Of course, it has less memory and fewer in/out channels, but it is still very powerful for some tasks.

WHAT SORT OF THINGS CAN I MAKE IT DO?

Virtually anything you could make a real computer do – just remember that it only has a little bit of RAM. Some of the projects documented on the Internet include things like robot controllers, automatic plant watering systems, programmable light displays...

YEAH OKAY, ANYTHING AMIGA-SPECIFIC?

A PC keyboard interface is one project we'll be tackling in the future, and there will be more.

I BET THESE THINGS ARE EXPENSIVE THEN.

Not at all. The chips cost about a tenner and the model we are using uses EEPROM technology, which means you can use it again and again.

OH ALRIGHT, GET LOST THEN AND LET ME READ THE REST OF THIS JOLLY GOOD FEATURE...

THE 16C84

The 16C84 is a simple 18-pin DIL package (i.e. it looks like you would expect it to and it has nine pins down each of its longer sides) with a 14-bit instruction set. There are actually 35 commands to learn, which is a lot less than the 68000!

It has two programmable I/O ports, which means they can be selected to act as inputs for your signals or outputs for turning on LEDs. In fact, that's one of the great things about the PIC. Its output pins can actually drive LEDs directly, without the need for extra transistors, making circuit design easier and cheaper.

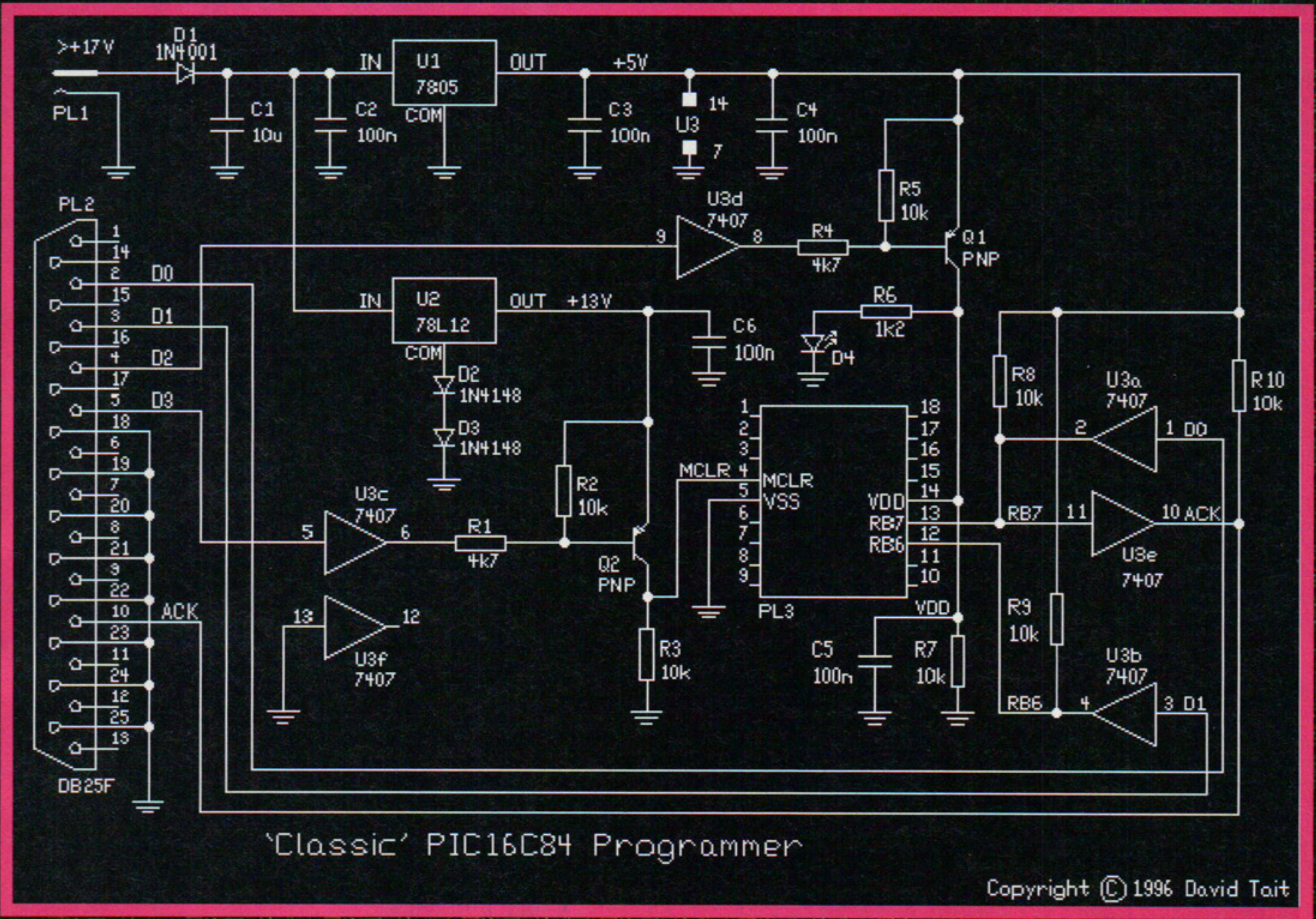
The 16C84 has 13 of these ports, making it capable of controlling a large number of external components (or receiving a variety of signals).

Aside from the I/O pins, the 16C84 has two pins dedicated to the oscillator. If you are using a simple RC oscillator (as in the example project later in this feature) this is where the oscillator connects to give the PIC a timing pulse.

THE PINS OF THE PIC



1 (RA2) – The third I/O pin for Port A
2 (RA3) – The fourth I/O pin for Port A
3 (RA4) – The fifth I/O pin for Port A
4 (MCLR) – Reset/Programming pin
5 (Vss) – The third I/O pin for Port A
6 (RB0) – The third I/O pin for Port A
7 (RB1) – The third I/O pin for Port A
8 (RB2) – The third I/O pin for Port A
9 (RB3) – The third I/O pin for Port A
10 (RB4) – The third I/O pin for Port A
11 (RB5) – The third I/O pin for Port A
12 (RB6) – The third I/O pin for Port A
13 (RB7) – The third I/O pin for Port A
14 (Vdd) – Ground
15 (OSC2/CLKOUT) – When using a crystal, outputs Clock/4
16 (OSC1/CLKIN) – The pin from which the PIC derives its clock.
17 (RA0) – The first I/O pin for Port A
18 (RA1) – The second I/O pin for Port A



If you use crystal oscillators, one of the pins also provides a clock/4 output. The remaining pins provide the power to the chip and a special pin provides the programming voltage needed to write instructions to the PIC.

Other members of the family have more complicated arrangements as they include on-board ADCs and such like, but let's keep things simple to start with.

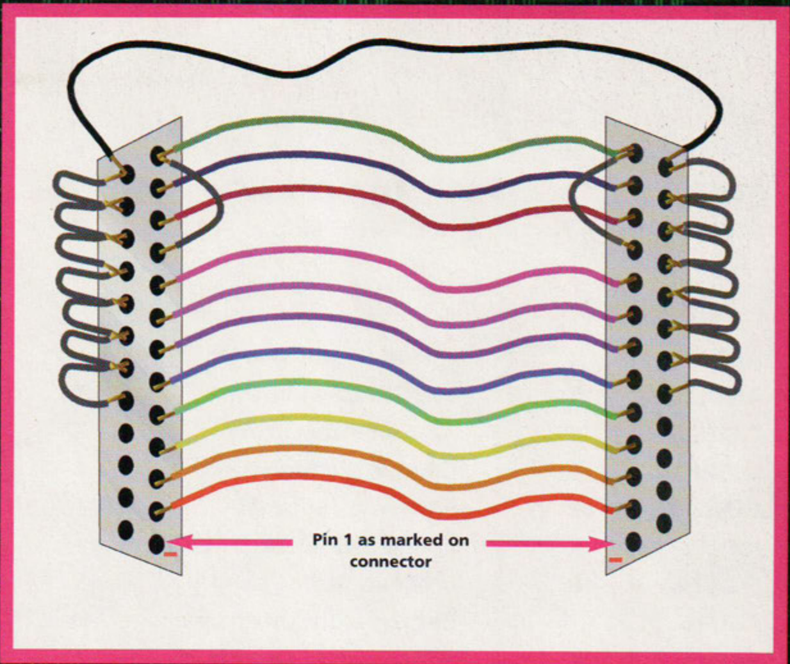
> "The remaining pins provide the power to the chip and a special pin provides the programming voltage…"

BUILDING THE PROGRAMMER

Before you can write a single line of code to your PIC chip, you will have to build a PIC programmer. If you are familiar with basic electronics, we've included a circuit diagram to construct David Tait's simple, useable "Classic" Programmer. Those of you without the necessary bits might like to consider buying the Maplin PIC Programmer.

In fact, you might like to consider it anyway as it is very cheap, works well and looks nice. It will save you having to root around finding the right bits and it is also ideal for the less experienced as it will come with the Maplin constructor's guide. There's also a phone-based help service available if you go wrong. The ordering details can be found at the end of the feature.

PIC PROGRAMMER CABLE



You will also need to make a special cable. This really isn't as tricky as it sounds. In fact, if you have a Parnet cable already then you're halfway there. The cable should be wired according to the diagram shown. Note that the only change from a standard Parnet cable is that pins 23, 24 and 25 are all connected to ground at both ends, as

Continued overleaf ➡

well as pins 18-22. This modified cable will still work as a Parnet cable, so you haven't ruined it or anything.

Whichever way you decide to build the programmer, remember that it's a lot easier with the proper tools.

You will need a soldering iron, a screwdriver and a pair of pliers. A proper chip insertion/extraction tool is very useful too. Remember that the PIC chips are quite sensitive to static and can easily be damaged.

TESTING THE PROGRAMMER

The programmer is pretty simple so you shouldn't have too much trouble building it. The *AmigaPP* software converted by Nick Waterman includes a debug feature (see the documentation) which will allow you to test if the programmer is working (make sure you remove any PIC chips from the unit before doing this).

If you are satisfied the programmer is working, you can now insert a PIC chip and start programming. Try writing one of the example .hex files to the PIC first as a test, then try verifying it using the *AmigaPP* software.

BYTE-ORIENTED FILE REGISTER OPERATIONS

OPERAND		DESCRIPTION	CYCLES	14-BIT OPCODE	FUNCTION
ADDWF	f, d	Add W and f	1	00 0111 dfff ffff	W+f -> d
ANDWF	f, d	AND W with f	1	00 0101 dfff ffff	W .AND. f -> d
CLRF	f	Clear f	1	00 0001 lfff ffff	0 -> f
CLRW	-	Clear W	1	00 0001 0xxx xxxx	0 -> W
COMF	f,d	Complement f	1	00 1001 dfff ffff	.NOT. f ->d
DECF	f, d	Decrement f	1	00 0011 dfff ffff	f-1 -> d
DECFSZ	f, d	Decrement f, Skip if 0	1(2)	00 1011 dfff ffff	f-1 -> d, skip if 0
INCF	f, d	Increment f	1	00 1010 dfff ffff	f+1 ->d
INCFSZ	f, d	Increment f, Skip if 0	1(2)	00 1111 dfff ffff	f+1 ->d, skip if 0
IORWF	f, d	Inclusive OR W with f	1	00 0100 dfff ffff	W .OR. f -> d
MOVF	f, d	Move f	1	00 1000 dfff ffff	f -> d
MOVWF	f	Move W to f	1	00 0000 lfff ffff	W -> f
NOP	-	No Operation	1	00 0000 0xx0 0000	———
RLF	f, d	Rotate Left f through Carry	1	00 1101 dfff ffff	<-C <- [7. . . . . .0] <-
RRF	f, d	Rotate Right f through Carry	1	00 1100 dfff ffff	->C -> [7. . . . . .0] ->
SUBWF	f, d	Subtract W from f	1	00 0010 dfff ffff	f - W ->d
SWAPF	f, d	Swap nibbles in f	1	00 1110 dfff ffff	f[0..3] <-> f[4..7] ->d
XORWF	f, d	Exclusive OR W with f	1	00 0110 dfff ffff	W .XOR. f -> d

BIT-ORIENTED FILE REGISTER OPERATIONS

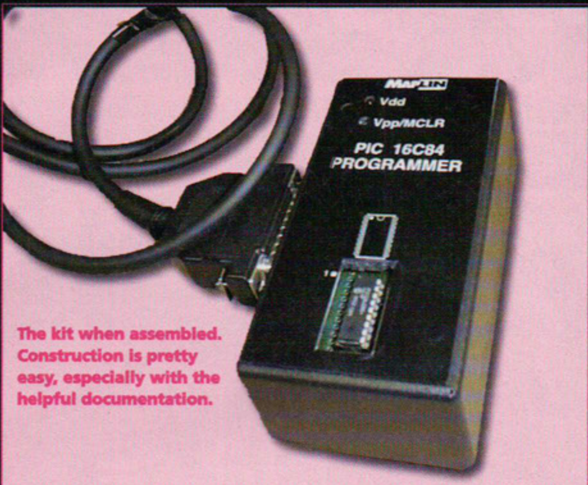
OPERAND		DESCRIPTION	CYCLES	14-BIT OPCODE	FUNCTION
BCF	f, b	Bit Clear f	1	01 00bb bfff ffff	0 -> f[b]
BSF	f, b	Bit Set f	1	01 01bb bfff ffff	1 -> f[b]
BTFSC	f, b	Bit Test f, Skip if Clear	1(2)	01 10bb bfff ffff	skip if f[b] =0
BTFSS	f, b	Bit Test f, Skip if Set	1(2)	01 11bb bfff ffff	skip if f[b] = 1

LITERAL AND CONTROL OPERATIONS

OPERAND		DESCRIPTION	CYCLES	14-BIT OPCODE	FUNCTION
ADDLW	k	Add literal and W	1	11 111x kkkk kkkk	k + W -> W
ANDLW	k	AND literal with W	1	11 1001 kkkk kkkk	k .AND. W -> W
CALL	k	Call subroutine	2	10 0kkk kkkk kkkk	PC+1 -> TOS, k-> PC
CLRWDT	-	Clear Watchdog Timer	1	00 0000 0110 0100	0 -> WDT (and prescaler)
GOTO	k	Go to address	2	10 1kkk kkkk kkkk	k -> PC (9 bits)
IORLW	k	Inclusive OR literal with W	1	11 1000 kkkk kkkk	k .OR. W -> W
MOVLW	k	Move literal to W	1	11 00xx kkkk kkkk	k -> W
RETFIE	-	Return from interrupt	2	00 0000 0000 1001	TOS -> PC, 1 -> GIE
RETLW	k	Return with literal in W	2	11 01xx kkkk kkkk	k ->W, TOS -> PC
RETURN	-	Return from Subroutine	2	00 0000 0000 1000	TOS -> PC
SLEEP	-	Go into standby mode	1	00 0000 0110 0011	0 -> WDT, stop oscil.
SUBLW	k	Subtract W from literal	1	11 110x kkkk kkkk	k-W -> W
XORLW	k	Exclusive OR literal with W	1	11 1010 kkkk kkkk	k .XOR. W -> W

b – a bit address within an eight-bit file register, d – destination select (d=0 -> store result in W, d=1 -> store result in file register f), f – register file address (0x00 to 0xFF), k – literal field, constant or label, W – Working register (accumulator).

COMPONENTS AND ORDERING



The kit when assembled. Construction is pretty easy, especially with the helpful documentation.

If you want to save yourself a lot of bother and effort, I strongly recommend that you buy the Maplin PIC programmer Kit. Even if you don't, they are one of the few suppliers of the actual PIC chips, so you'll probably end up ordering something from them.

The PIC kit itself costs just £19.99, and includes all the components, a box, labels, PCB and instructions. The order code is LU29G.

The standard PIC16C84 chip is order code AY31J and costs £8.99 including VAT, but there are discounts available for larger orders (for example, 10 will cost £47.80).

To order, either get the latest catalogue from WH Smith, or phone 01702 554000. Enquiries are on 01702 554002.

If it isn't working then there are three possible problems:

- You have damaged the PIC chip. They are sensitive to static and require careful handling.
- The programmer hardware isn't working. Usually the *AmigaPP* software will notify you of any faults, but if you're unsure you should check the circuit properly with a multimeter.
- *AmigaPP* isn't configured properly.

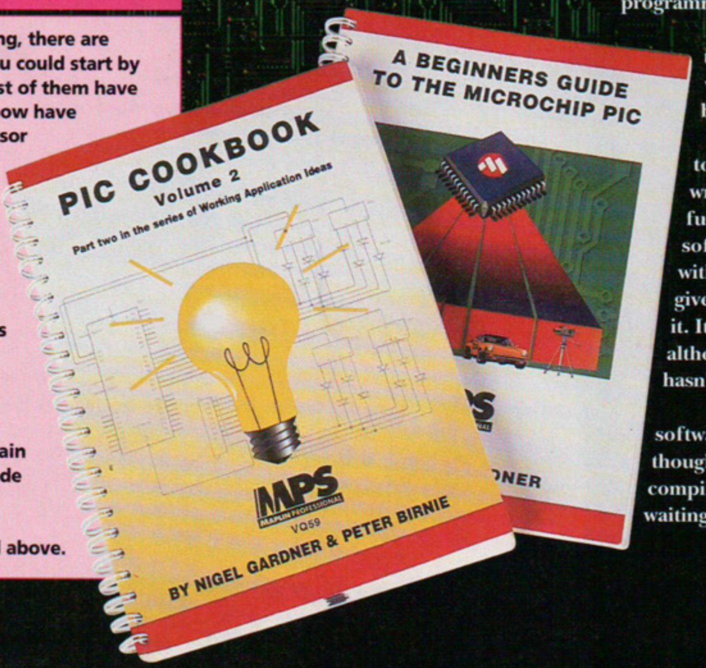
Make sure you have set the env:ppsetup variable properly (e.g. for the Maplin programmer, enter the Shell and type: Setenv ppsetup 0).

BOOKS

If you are new to electronics or programming, there are plenty of general books to help you out. You could start by having a look around your local library. Most of them have some basic electronics manuals and many now have a lot of programming books. The PIC processor commands are not too dissimilar to the "pseudo-code" examples used in many computer science books.

To really understand how the PIC series works, you should consider getting Maplin's *A Beginner's Guide to the Microchip PIC* by Nigel Gardiner. This deals with the whole PIC family but also has loads of useful generic information about programming and building PIC-controlled circuits. Maplin also have a series of other books relating to the PIC, including the *PIC Cookbook, Volumes 1 & 2*. These books contain many ideas for projects, including source code and circuit diagrams.

Pick up the latest Maplin catalogue at WH Smith or visit the Maplin Website, listed above.



Once your programmer is working and your PIC is written you can skip straight to the test project if you like, but it might be worth understanding exactly what the PIC is doing.

WRITING SOFTWARE

Although when you are developing your own real-world applications you will most probably start by designing the hardware the PIC is to be interfaced to, it is probably more important initially that you understand what the PIC can do in terms of its software.

The whole instruction set is listed on the page opposite. Don't worry if you don't understand everything in it.

The important things are the commands themselves, the values they take and the results. The notes at the bottom describe the notation used.

Essentially, all the commands are simple. Just concentrate on moving data around, adding, subtracting and testing for a specific value. By combining all of these, it is possible to carry out just about any computer function.

Consider this code fragment:

```
         CLRF 0xC0
loop:    INCFSZ 0xC0
         GOTO loop
         ADDLW 0x10
         ....
```

The first line clears the register at the hex address C0. The second line has a label, which we will be using in a moment. The instruction on that line increments (adds one to) the contents of the register at 0xC0. Then it tests that value to see if it is zero and, if so, skips the next instruction.

This may seem nonsensical but after the number has reached 0xFF it simply sets the carry flag and then goes back to zero.

The next line redirects the program back to the loop but is skipped if the condition above is met. The final line in our fragment simply adds a constant to the accumulator and carries on.

You can hopefully see how a few instructions build into a useful program. We could have used the above example as a simple delay loop or we could loop and test another value, say that of an input pin, in order to wait for something to happen.

If you don't understand it yet, don't worry. It really is simple but the unfamiliar sounding instructions and strange-looking parameters are just putting you off.

Try using the table here to work out what some of the samples on the CD (if you have the CD version of the mag, there are many examples included with the different PIC software packages), or the initial program discussed at the end actually do.

We don't have room for a full-blown explanation of microprocessor programming as it would probably take a whole book. However, there are some details of a few very useful books given in the boxout on this page.

We will be coming back to the subject of programming next month.

WEB SITES

Microchip: www.microchip.com
Makers of the PIC, their site contains source code and information on all the PIC models.

Maplin: www.maplin.co.uk
The electronic suppliers' website.

David Tait: www.man.ac.uk/~mbhstdj/
Homepage of the best known PIC enthusiast.

Nick Waterman: www.leonet.co.uk/~Nick/Pic/
Author of the *AmigaPP* software.

PICax: www.amiganet.co.uk/picax.html
Homepage for *PICax*, where future updates will be posted and where you can send your own designs.

PICAX

Also included on the CD this month, and shortly to be available on Aminet, is *PICax*. This is an Assembler for the PIC which takes the ASM files (i.e. the files written using the mnemonic codes shown opposite) and converts them into the hex files required by the *AmigaPP* programming software.

The program was ported to the Amiga by me, from some very nice UNIX code written by James Cleverden.

Unfortunately, I have been too busy going to shows and writing the magazine to provide full documentation for the software, although running it with the parameter "?" should give you some idea of how to use it. It is still really a beta release – although it works fine for me, it hasn't been extensively tested yet.

You don't need to run this software to make the first project though, as it has already been compiled for you. So what are you waiting for? Turn the page now!

Continued overleaf ➡

Project 1: The Flashing Light Test

The first project we'll undertake is a simple one. It doesn't really demonstrate the awesome power of the PIC chip as it merely flashes some lights on and off.

It's really intended to just test that all the components of your PIC development package are working, but you could perhaps find a use for it elsewhere. Using eight LEDs connected via resistors to the output pins of Port B, the PIC illuminates them in a sequence rather reminiscent of that old David Hasselhoff vehicle (literally), *Knight Rider*.

As you can see, the amount of added-on components is rather minimal.

All that is required are the Light Emitting Diodes themselves, some resistors (to prevent a short circuit through the PIC) and the basic oscillator circuit. A decoupling capacitor has been added to prevent noise on the power tracks from interfering with the operation of the PIC. That's all there is to it.

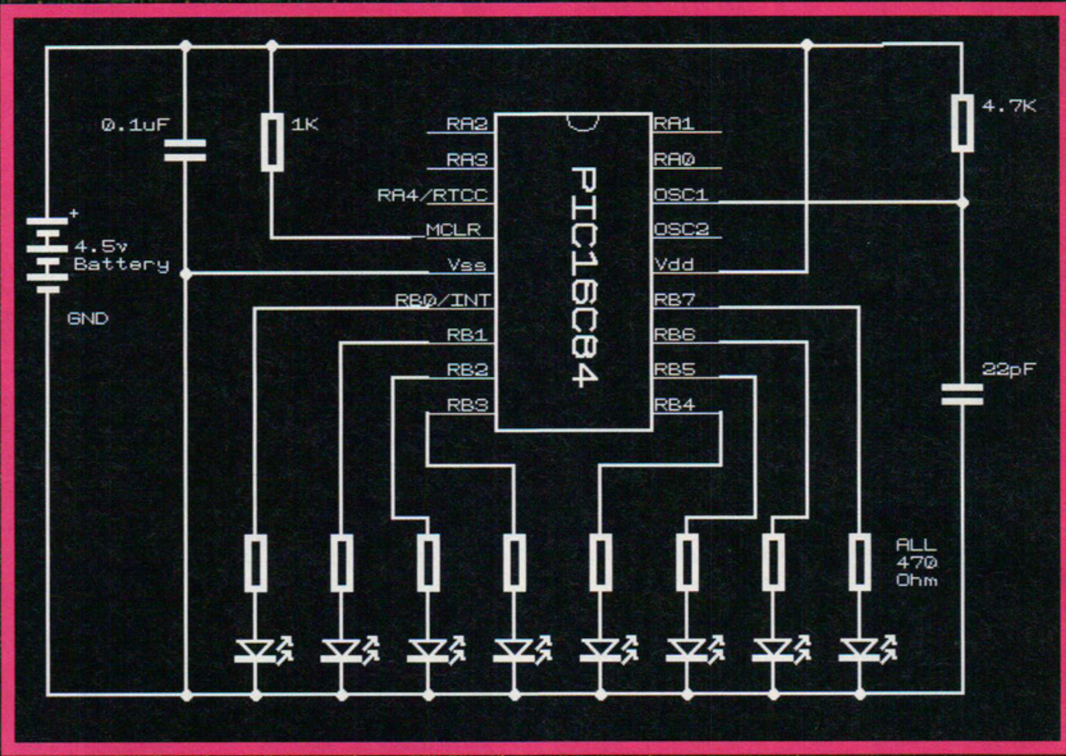
You could build this circuit without a PIC by using some fairly standard logic chips, but even here we can see the usefulness of the PIC – this design is smaller and probably cheaper than doing the same thing with a timer and logic chips. Also, if you get bored with it, you can program in a different light-show using exactly the same circuit. You just have to take out the PIC and write a new program. With a logic-based circuit, you'd have to redesign the whole thing!

This project makes use of another handy feature of the PIC – the watchdog timer (WDT). This part of the processor makes sure that the PIC program never gets stuck for too long.

If a defined amount of time passes without anything happening, the WDT will reset the PIC and restart the program, or jump to any routine you might have specified.

As well as providing extra protection for automated systems, it can also be used as a simple delay loop, as in this project. The Sleep statement basically pauses the PIC. It will do nothing so the WDT gets bored and returns to the program where the code tells it to. The source is also provided in David Tait's original *PP* documentation, included with *AmigaPP* on the CD.

If you have a great idea for a PIC project, please write in. Before I start work on next month's project, I must thank Nick Waterman, James Cleverden and David Tait for their direct and indirect help. See you next time.



Listing 1

These equate statements are automatically performed by PICax, but should be included when using other assemblers

```
;PORTB   EQU    6
;TRISB   EQU    86H
;
;STATUS  EQU    3
;CARRY   EQU    0
;RP0     EQU    5

MSB      EQU    8                        ;BIT POSITION OF LEFTMOST LED
OPTREG   EQU    81H
;
         CLRF   PORTB                    ;ALL LEDS OFF
         BSF    STATUS,RP0               ;SELECT REGISTER BANK 1
         CLRF   TRISB^80H                ;SET PORTB TO ALL OUTPUTS
         MOVLW  0AH
         MOVWF  OPTREG^80H               ;ASSIGN PRESCALER (1:4) TO WDT
         BCF    STATUS,RP0               ;SELECT REGISTER BANK 0
         INCF   PORTB,F                  ;TURN ON RIGHTMOST LED
         BCF    STATUS,CARRY             ;CLEAR CARRY
LEFT     SLEEP  ;WAIT FOR WDT TIMEOUT
         RLF    PORTB,F                  ;TURN ON LED TO LEFT
         BTFSS  PORTB,MSB                ;REACHED LEFTMOST?
         GOTO   LEFT                     ;LOOP IF NOT
RIGHT    SLEEP  ;WAIT FOR WDT TIMEOUT
         RRF    PORTB,F                  ;TURN ON LED TO RIGHT
         BTFSS  PORTB,0                  ;REACHED RIGHTMOST?
         GOTO   RIGHT                    ;LOOP IF NOT
         GOTO   LEFT                     ;START NEW CYCLE
         END
```

PICax or MPASM should assemble the program to give this hex representation:

```
:1000000008601831686010A3081008312860A031056
:100010006300860D861D08286300860C061C0C28CC
:020020000828AE
:00000001FF
```

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Java

Is it your cup of tea?



Part 2

Simply an excuse to make puns about coffee, or is there a real chance of an Amiga Java system? John Kennedy finds out.

At the time of writing, there isn't a definite, complete, ready-to-go version of a Java Virtual Machine for the Amiga. There are several systems still in development however, and practically all of them are promising "any time now" for a release date.

I'm sure many are holding off to see what kind of operating system and processor any future Amigas are going to sprout before making a song and dance of releasing a Java system.

Here is a list of the companies and individuals who have announced that they are in the race to deliver a working Amiga Java system. No doubt we'll be bringing you more news on their systems as more announcements are made, so stay tuned to your favourite Amiga magazine.

Name: Merapi Developer: Haage & Partner

The name of H&P is not a strange one to Amiga users. H&P have been responsible for some of the Amiga's most modern and innovated products and a Java package would certainly cement their name in the history of the machine.

The team of developers includes programmers responsible for the StormC compiler, and this goes some way towards explaining the support for the PowerPC platform. As it includes a JIT compiler, the Merapi system could be one of the fastest Java implementations on any platform – when it's finally released, that is. Although they started way back in 1996, there is still no firm release date.

Merapi will link up with the Voyager NG Web browser to provide an integrated and powerful Internet and network system for the Amiga. A port to pOS is also promised.

Unlike other systems, Merapi has been developed for the Amiga from the ground up, rather than being a port of a UNIX system. There are high hopes for this product, so let's hope that H&P will deliver.



Name: P'Jami Developer: unknown

P'Jami was one of the first Java Virtual Machines announced for the Amiga, but things have gone very quiet since 1996.

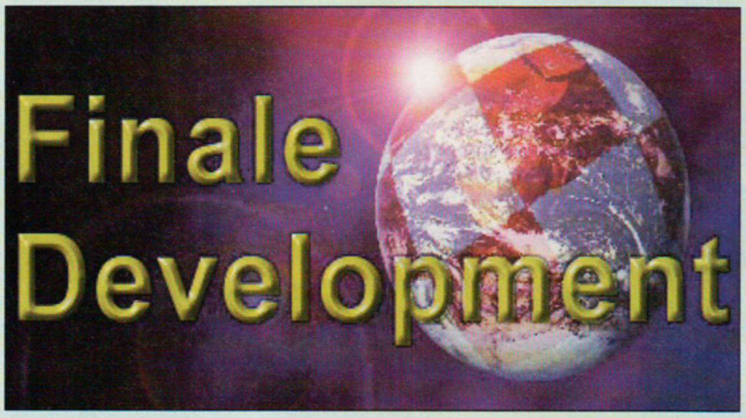
The last known links to their Web site have now stopped working, and it seems to be a fairly safe bet that development has ceased.

Name: Kaffe Developer: Tim Wilkinson/Kaffe.org

Kaffe is a multi-platform version of a Java Virtual Machine and JIT compiler. It is available for many platforms, not just the Amiga, and is under constant development. Kaffe is similar in concept to tools such as the GNU C/C++ compiler, in that it's free, it's the product of mass Internet-based co-operation and it exists for many different machines. It's also not the most user-friendly of systems as it is command line driven. However, it's here now, and it's free.

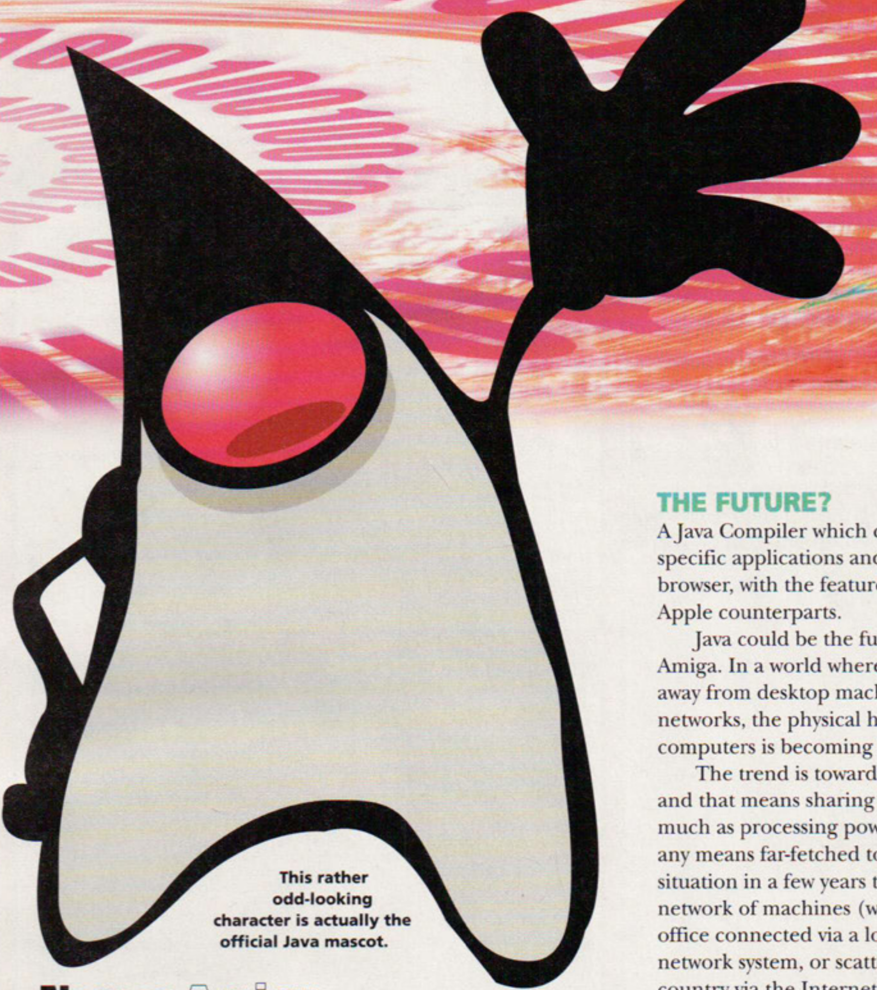
Name: MOca Developer: Finale Development

This is another commercial Java Virtual Machine and JIT package, and it too has an associated Web browser called Web Cruiser. Finale are well known for their ClassAct BOOPSI development system, and so they are well qualified to create a reliable and quick implementation. The promised system will be available for both AmigaOS and pOS and will support the PowerPC platform.



Name: Guavac Developer: unknown

Guavac is a standalone compiler for the Java programming language. It was written entirely in C++ and should be portable to any platform supporting Gnu's C++ compiler or a similarly powered system. It is another multi-platform system and is therefore really for dedicated hacker-types only. It's worth mentioning that operating systems such as Linux have many excellent software tools available and installing it on your Amiga is a very good way to keep abreast of what is currently available.



This rather odd-looking character is actually the official Java mascot.

Name: Amjay
Developer: Richard Gansel

According to its author, Amjay is still in an early state of development. It therefore lacks many native functions and other parts of the JDK (Java Development Kit). Nevertheless, the compiler and some compiled programs should work. Here's hoping work continues.

JUST IN TIME

Last month I mentioned that Java was an interpreted language, running on a Java Virtual Machine (JVM). As each line in the program is read and converted one-by-one, Java programs don't run particularly quickly.

For that reason, many systems now have a Java compiler available. The compiler takes the ordinary, platform-independent Java program and converts it into a native executable. The "native" program is code which the host machine can execute directly, and so it runs much, much faster – ten or more times as fast, in fact. As the compiler performs the conversion after downloading the program, it's called a "Just In Time", or JIT, compiler.

The Amiga has several JIT compilers in development – in fact, the majority of the projects announced all aim to include a JIT compiler as standard.



Java and the Java logo are registered trademarks of Sun Microsystems.

News flash

Sun have admitted that Java will suffer from its own version of the Millennium Bomb problem. The Java version is expected to fail at the end of a year. However, the year in question is 292,272,023, so it's not expected that the government will announce a special task force to look into it.

News flash

THE FUTURE?

A Java Compiler which creates Amiga-specific applications and a standard web browser, with the features of its PC and Apple counterparts.

Java could be the future of the Amiga. In a world where there is a shift away from desktop machines to networks, the physical hardware of computers is becoming less important.

The trend is towards distribution, and that means sharing software as much as processing power. It is not by any means far-fetched to imagine the situation in a few years time where a network of machines (whether in an office connected via a local area network system, or scattered over the country via the Internet) can share applications and data, independently of the make of computer.

PCs, Unix boxes, Apples and, of course, Amigas, could work side-by-side running identical software. Java makes this vision possible.

The Amiga and Java could have been made for each other. Both employ state-of-the-art multitasking and memory efficiency features as standard, and both had the same buzz and excitement of hi-tec around them, certainly at the time of their launch at least.

An Amiga running Java would instantly regain respectability, as well as a huge new base of software.

However, although Java has some unique and important features, its success is far from being assured. At the moment, Java is struggling with the problems of limited and new development tools, new developers and a lack of real applications to show it off.

Java is a very young language compared to C or C++ and it takes time for people to get up to speed with it.

What's even worse is that Microsoft and Sun are having spats over how it should be developed, with Microsoft bending the rules slightly to make it more attractive to Windows users. One thing that's certain is that there is a huge interest in Java and what it could mean for the future of computing as a whole, not just the Amiga's contribution.

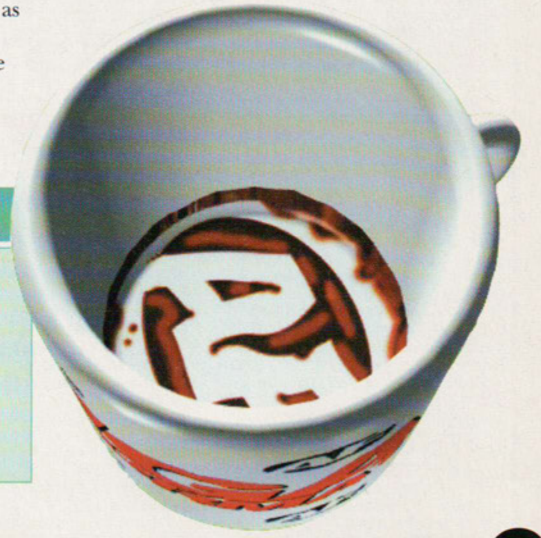
To get the ball rolling, the Amiga needs a good JVM and JIT compiler, and it also needs a stand-alone Java Compiler to create applications.

The rewards are worth the fight, so let's hope Java and the Amiga make it into the next millennium together. AF

> "The Amiga and Java could have been made for each other. Both employ state-of-the-art multitasking..."

LINKS

Haage & Partner: http://haage-partner.com
Amiga Java list: http://www.personal.u-net.com/~amiga/BuiltWithAmiga/Java.html
Finale Development MOca: http://www.finale-dev.com/
KOFFIE: http://www.IAEhv.nl/users/weertj/KOFFIE/KOFFIE.html
Guavac: http://http.cs.berkeley.edu/~engberg/guavac/
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SCREENPLAY

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Although it's undoubtedly good news that there's going to be an Amiga resurgence in a couple of year's time, what are we going to be doing until then? Is there any point in upgrading your machine now if it's going to become obsolete? The simple answer is yes. Games like *Quake* and *Malice* are well worth playing and if you're going to get two years of playing time for your money then it's got to be money well spent.

Don't deny yourself, there's a lot of serious games playing to be done over the next couple of years, so let the boffins worry about technical things and get down to having some serious fun instead. Enjoy...

Andy Smith

AMIGA FORMAT'S REVIEW POLICY

WHAT OUR REVIEW SCORES MEAN

Every month we scour the world's software houses for the latest and greatest Amiga games. We try to ensure we keep you as up to date as possible and we'll stop at nothing to bring you the best, definitive, no-nonsense reviews of the games that matter.

90+%	The crème de la crème. Only the very best, most playable and original games are awarded an AF Gold – the most highly prized rating there is.
80-89%	These games are very good, but due to minor flaws are not the finest examples of their genre.
70-79%	Good games which are worth buying, especially if you have a special interest in a game type.
60-69%	Average releases with somewhat limited gameplay and appeal. Games in this category tend to be flawed.
50-59%	Below average games which are unlikely to impress your mates or your wallet..
40-49%	Overwhelmingly poor quality games with major flaws and appalling gameplay.
Under 40%	The absolute pits.



***Beambender*, just one of a handful of brand spanking new games coming to an Amiga near you.**



Despatch this chap as quickly as possible because he's not afraid to use his flame-thrower.



***Robocop* has got a lot to answer for. An ED209-alike is toasted in *Genetic Species*.**



Splendid lighting effects are evident throughout *Genetic Species*. Be spooked.



Tons of new *Quake* levels await in *Time of Reckoning*. Prepare thyself.



***Myst* is surreal. *Myst* is complex. Allow us to make sense of it all for you.**



Previews






Keeping you bang up to date with all the games coming soon is Amiga Format's very own Andy Smith...

Virtual Karting 2



The further away you pull from the kart, the more of the track ahead you get to see – handy, eh?

Virtual Karting 2	£14.99
Release Date:	June
Publisher:	Epic Marketing
Telephone:	0500 131486



There are loads of viewing options available, and we mean it when we say the game looks a whole lot better on-screen than it does on paper.

Despite the Summer sunshine, the Amiga gaming community are hard at it with several new games in the pipeline, including this long-awaited sequel to the rather lovely *Virtual Karting*.

One of the things that made the first game so enjoyable was the fact that the programmer (Fabio Bizzetti) realised there's a big difference between racing karts and any other kind of four-wheeled vehicle. Karts are light, have tremendous acceleration and you can throw 'em through the corners like nobody's business. In fact, your ability to buzz through corners without lifting your foot from the accelerator and just occasionally dabbing the brakes is often the key to success or failure.

And keeping things fast is the key to making successful Amiga racing games, and that's just what Fabio has managed to do with up to 50fps on an unexpanded A1200.

There are two classes of kart to choose from: 80cc, which is easy to drive but lacks power, and the beefier 125cc, which is generally harder to drive. Whichever kart you choose though, don't expect to go flying past the other drivers. Though they're all in the same machine as you, the five computer-controlled drivers all know the tracks like the back of their hands, so getting past 'em really takes some skill.

There are a number of tracks to choose from and a whole range of viewing angles so you can get the one you feel most at home with. If you're not keen on joystick-controlled games you can skid around the place on the mouse and the keyboard if you prefer.

And as if getting past the other drivers wasn't hard enough, there's a crippling time limit to beat, so that should keep you well and truly on your toes. Watch out for the



definitive review of *Virtual Karting 2* in next month's rip-roaring *AF*.

And if you're wondering about the poor quality screenshots then I'm afraid that's because our grabbing system isn't able to keep up with the Amiga which is dynamically changing the colour palette (ahem, that's according to Nick, I thought it was just completely knackered).

Wheels on Fire



With all that damage to the side of the car it's no wonder you're trolling around in fourth place.

Wheels on Fire	£TBA
Release Date:	June
Publisher:	Epic Marketing
Telephone:	0500 131486

Your car wears out pretty quickly so you've got to keep buying replacements as well as upgrades.



Staying on four wheels for the moment, we also have this 3D racing game. This one's back to your more traditional arcade racer in which the player joins three computer controlled cars and races through a series of heats round a track, with prize money being awarded to the best-placed finisher.

Though you're only racing against another three cars there are actually 12 of you taking part in each race – you see, there's four heats of four drivers and in order to progress through the championship you've got to accumulate enough points to move into the next round. I'm sure you get the idea.

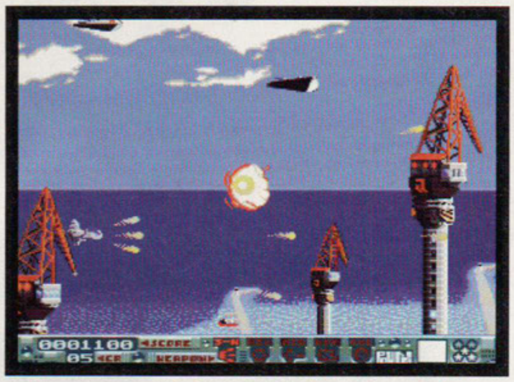
Colliding with the other cars is not such a good idea as your car soon takes damage to its suspension, tyres, engine and armour. End up blowing any of those and you're going to have to sit there for the rest of the race while the others go whizzing past you, waiting



to replace the damaged part in the shop at the end of the race.

Obviously, if you've run out of money then it's game over. There's a variety of courses, as you might expect, and don't expect them all to be easy. As well as tricky corners there are roadside obstacles to avoid (again, crashing into barriers doesn't do your car a lot of good) and the tracks are far from flat – expect to be going over jumps and through dips a lot of the time. Groovy, eh?

Check out the full review of the game in next month's *Amiga Format*.



Another alien invader bites the dust, but is there still room for Amiga shoot-em-ups in the 90s? Read the full review next month...

Powder

Powder	£TBA
Release Date:	June
Publisher:	Epic Marketing
Telephone:	0500 131486

Although it's been a long time since we had a new sideways scrolling shoot-em-up to play with, that's all about to change with the imminent release of *Powder.*

You're the obligatory spaceship armed with a front-firing gun and you must survive wave after wave of flying attackers while dodging the shots from the ground-based installations too.

Expect all the usual weapon power-ups, mid and end of level guardians and a very sore trigger finger, but also expect plenty of surprises in the shape of collapsing buildings, enemies carrying other enemies and the screen absolutely full of bullets!

The standard of shoot-em-ups is high these days (well, they have had about 15 years to get it right) and it takes something special to stand out.

Hopefully *Powder*'s got a few tricks up its sleeve (the demo I've played is obviously very stripped down, so though it plays fine I haven't been able to see everything it has to offer). Once my wrist stops aching I'll be putting this through it's paces and, again, you can read the definitive review in a future *AF*.

In the meantime, get your digits tuned up and your reactions honed.





There you are, just about level with the top of that monorail. No matter where you are, keep shooting.



Beambender

Beambender	£TBA
Release Date:	June
Publisher:	Epic Marketing
Telephone:	0500 131486

And here's a game the likes of which haven't been seen for donkey's years. Remember the old Gremlin game *Deflektor*? Where you had to guide a laser beam round an arena by dropping a series of mirrors? Well, it was a cracking game and it's obviously the inspiration behind *Beambender*.

There are some differences, however. There are at least two coloured cannons on each level and two corresponding exits.

The idea is to get the right coloured laser beam into the right exit. This isn't too much trouble when you've only got a couple of lasers to play around with, but when you've got four of them, and their laser beams need to pass through colour convertors, things start to get a little bit more tricky.

There are a range of mirrors and convertors placed at the bottom of the screen and these can be picked up and placed on the available squares on the playing field (there tends to be a lot of holes so you can't just put mirrors and things where you like). Unfortunately though, even that's not as easy as you'd hope because the parts available to you keep changing at random every couple of seconds, so you can waste valuable time waiting for the right part to become available before you can grab it. Did I say valuable time? Oh yes, that's because you're fighting against an horrendous time limit too.

Early indications are that this is every bit as devious as *Deflektor* was, and I haven't even mentioned the little smiley faces that wander around leaving puddles everywhere which then make the tiles they're on impossible to build on.

Groovy stuff, and prepare to have your brain exercised in the very near future. It's unlikely you'll have been so happy to see a pause mode for a very, very long time!





That's got the green beam into the right place, now to concentrate on getting the red one right – before the time runs out.

Malice



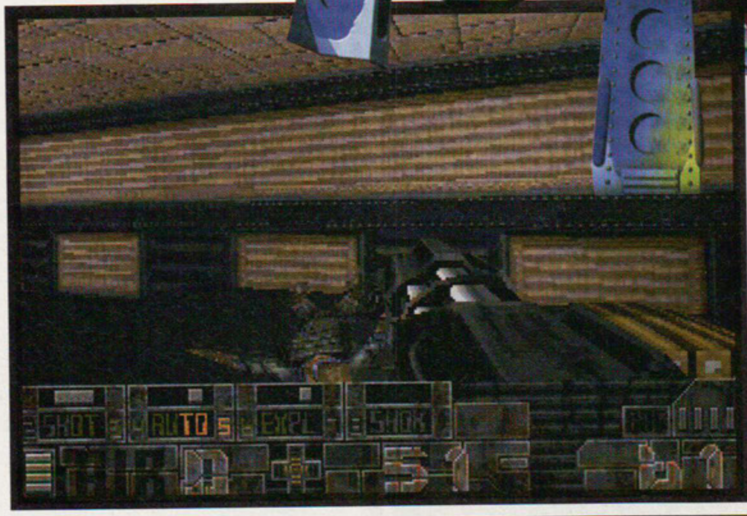
AMIGA GOLD FORMAT

Having been left quaking in his boots, Andy Smith is back for more teeth-grinding, grenade launching gore...

Hell's teeth and buckets of blood, as my old Gran used to say and I bet she'd have loved this. There's gore all right and it comes in buckets, skips and any other large receptacle you can think of.

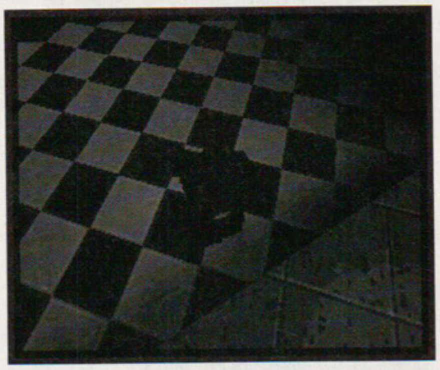
Assuming you've got a machine that any Amiga owner would die for (like Nick's, which is what I've been playing *Malice* on, not least because it's got some 72Mb of RAM) and assuming you've out *Quak*ed yourself (though you surely won't have yet, but there might come a day) the next thing you're going to want is an add-on. Something like *Malice* should suffice.

Here the *Quake* engine is taken to the 23rd Century and you play the part of a lovely mercenary called Damage. In this day and age, law and order have been forgotten and in order to remain in good health you have to rely on the large corporations that run the show.



Oh the sweet whistle of the minigun. It's a devastating weapon, as this chap has found out to his cost, but boy, does it eat up the ammo!

> **"...it only takes a couple of blokes behind you with Uzis and your health can hit zero in seconds."**





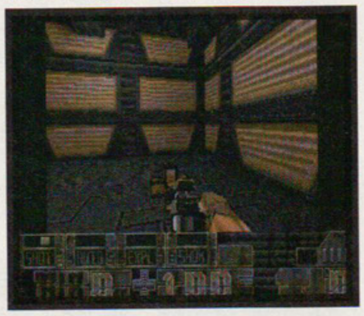
The city you live in (and it ain't the City of Angels) is run by two warring corporations, Takahiro Industries and the B.O.S.S. underground crime syndicate. Fortunately, you work for the latter (well, who wants to play a game about time and motion studies anyway?) and as such you're a paid mercenary working for the head honcho, Colonel Bossman (who's some kind of Davros character in that he's encased in a metal box). He gives you mission orders and it's down to you to carry 'em out.

Just like *Quake*, *Malice* is dark and moody. Unlike *Quake* though, the baddies you come across are most definitely human. Sure, coming across a huge Shambler can put the willies up you when you're playing *Quake*, but you'll be surprised how scary a flame-thrower toting bloke can be too. Especially when you haven't got much health left.

And that's the first departure from the *Quake* rules that *Malice*



A picture from one of the cut-scenes that punctuate the levels – here the story of the two rival corporations unfolds.



With no armour you'll be getting hurt a lot more than you did in *Quake*, so you'll be seeing a lot more of these health bonuses. Use 'em wisely.





Red arrows on the walls keep you on the right track to the exit. Dead people are good indicators of where you've already been and people shooting at you are good reminders that your work isn't done yet.





Getting into a firefight is a risky but necessary business as you keep having to hit the reload key. Don't worry, it soon becomes a reflex action.

introduces you to. There's also no armour in this game – every shot you take hurts and that means you have to be slightly more cautious all the time. To compensate, the designers have been liberal with the health bonuses, but it only takes a couple of blokes behind you with Uzis and your health can hit zero in seconds.

This changes the whole flavour of playing the game. In *Quake* you could, at times, rely on your armour and the run button to get you out of trouble but in *Malice* everything's so much more immediate. There's also no Megahealth so you're only ever going to be 100% fit.

Likewise, there's no Quad Damage either because *Malice* remains firmly in the real world (shyeah, right) and doesn't give you any magical or enchanted items such as the Pentagram of Protection.

What it does give you is a whole mess of new weapons to play around with – the beautiful Minigun, the subtle vertical-barrelled shotgun and the sublime Punisher (which fires a forced plasma beam. Scrummy!).

As in *Quake*, you default to the biggest gun you've got ammo for but, unlike *Quake*, you do have to keep reloading the things. Again, this subtly changes the gameplay because should you wander into a room with several baddies in it, you've got to figure you're going to



be reloading a couple of times and that valuable time might not be yours to spare (maybe there's another way? Maybe a couple of grenades from above would do the trick?).

Another departure is the addition of a couple of extra, what the game calls, toyz. You take damage falling off of high ledges in *Malice* so they've provided you with a parachute – fall off a building, hit the jump button and float to the ground painlessly. You could even strafe the unwary enemies below while you're doing it. There's also a hover board (just like the one in *Back to the Future*) to scoot around on, and a probe for you to play with if you want to take a look somewhere but don't actually fancy poking your head round the corner and risk having it blown off. When you're playing around in the underwater sections of the game you can either don your scuba gear or, if you can find one, get in the lovely mini-sub. These sexy bits of kit come with an unlimited air supply and auto-guided missiles. This makes exploring underwater a very pleasant experience – until you come face to face with a frogman, barracuda or blowfish. But hey, don't forget them torpedoes!



The old familiar "everything's gone sideways 'cos I'm dead" screen.

"This makes exploring underwater a very pleasant experience – until you come face to face with a frogman..."

As well as the new things to play around with and the whole load of new enemies, there are some added scenery effects such as the pushable crates. On the later levels these need to be pushed around to solve puzzles (oh yes, it's not all blood 'n' guts, there's a wee bit of thinking to be done too) and reveal hidden exits.

In one-player mode you've got a whole new 18 levels to try and if you're one of the lucky few who's going to be able to play in a Deathmatch then you've also got another five levels of that to play around with. However, to be frank, that's hardly worth considering.

What is worth considering is how well *Malice* plays. Ok, so *Quake* did the hard work, but the well-designed levels and subtle changes of game style ensure that playing *Malice* a cracking experience.

It's a shame you're still going to need a top-end Amiga to get the most from it, but if you've upgraded enough then you'll enjoy putting all that extra hardware to work. Top stuff – it should be on top of your list of '*Quake* Things To Get' once you've exhausted that game. AF



The game even takes the mickey out of you if you want to quit and restart. Nice of it, eh?

SUPPLIER: Weird Science (0166 246 3800)
PRICE: £14.99
VERSIONS: AGA/GFX card
REQUIREMENTS: Fast machine with FPU and CD
RELEASE DATE: Out now

GRAPHICS: ●●●●●
Every bit as mean and moody and good looking as Quake. Splendid extra little effects.

SOUND: ●●●●○
Brilliant use of aural clues and good speech. The language is a little unnecessarily crude.

ADDICTION: ●●●●●
Just as addictive as Quake.

PLAYABILITY: ●●●●○
Get through the annoying training academy and you're off. Just remember to reload...

OVERALL VERDICT:
Stonkingly good stuff. The perfect Quake add-on if you fancy some futuristic hi-tech weapons to play. Pass the minigun please...

91%

Genetic Species





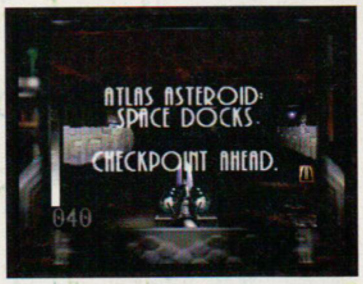


After reviewing the mighty Quake last month, Andy Smith wonders if Vulcan's clone can possibly compete?

> "...you start off with a simple .44 Magnum and get to find and use better weapons as you explore the levels."



Oh, the joy of big weapons. You'll not get your hands on this until later in the game, unfortunately.



Quake. Brilliant. The tension, the levels, the monsters, the sound, the experience. Almost everything about the game's brilliant. Almost, because you need an amazing Amiga to get the thing to run at all and, even then, one of the game's biggest features is inaccessible to 99.9% of Amiga owners – the network option.

Even for that 00.1% of people who could get their go-faster Amiga networked, they'd better stick to only playing other Amiga gamers because the machine's simply not fast enough to take on anyone who's got a decent Pentium in front of them. Just ask Ben about all the tears of frustration he's cried...

Genetic Species is much more accessible to the Amiga gaming public. Sure, you need a decent slice of memory and an accelerator card is going to be very useful, but you don't need a graphics card to get the thing to move at a decent speed –



The start of the game and already it's starting to feel creepy. You know there's going to be something nasty behind that door, don't you?









Avoid running through fires if you can because they tend to hurt. Patience and caution are the key words here.







These aliens will stop at nothing – some of your old mates have seen one too many of their experiments.





Blasting away in the sewer. If you've got the ammo, cheeky little shots every now and then never hurt.



your ordinary AGA chipset is fine and you'll be able to get all the enjoyment from the game, albeit at a lower detail level and at something less than the full screen.

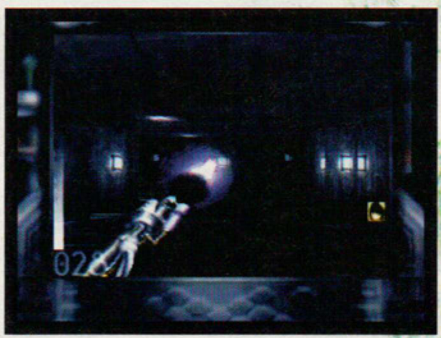
So what's it all about then? Well, you can probably make up your own storyline but the official one's something to do with a spacestation gone haywire and you're sent in (well, you being some kind of BioShifter thing or whatever) to sort it all out. Familiar stuff and suffice to say it's a *Doom* clone in space, so that's all you really need to know.

All the usual elements are included – you start off with a simple .44 Magnum and get to find and use better weapons as you explore the levels.

Talking of exploring, *Genetic Species* really needs a map. There's a simple area map that can be called up whenever you log onto one of the orange computer terminals that are scattered around. However, these are very general and it's very easy to get yourself lost as you sneak or run about the place.

Even when you've been told that a level's clear of enemies so you can breathe a sigh of relief and go back and try to find all those extra energy and ammo packs you saw earlier but were unable to pick up, it can be annoying because you can waste an awful lot of time wandering around very similar-looking corridors.

This could, arguably, be a gameplay feature. "Well, it's like real-life where you don't have a map anyway", could be the argument, but it's not washing with me. We've become used to maps in games of this type and though *Quake* didn't have one, that was because you didn't really need it much. The levels



were not all full of identical corridors and it was quite easy to remember how to get to that balcony you passed a while back because, although large, the levels were easy to navigate as they were in proper three dimensions.

Which is another thing *Genetic Species* lacks. It's back to the *Gloom, Breathless, Alien Breed,* et al school of pseudo 3D. No balconies above you, no dungeons below you.

In truth, *Genetic Species* cannot be penalised for this but just be aware that you're not going to be playing in a true 3D world. And after playing *Quake,* which was in a true

> **"Fuel tanks, barrels of nuclear waste and what have you can usually all be blown up (don't stand right next to them…)"**

3D world, it's very obviously a step backwards when you're forced into pseudo 3D again. But, as I say, this isn't *GS*'s fault so, though it's worth pointing out, it's not going to lose any marks for it.

As well as having most of the

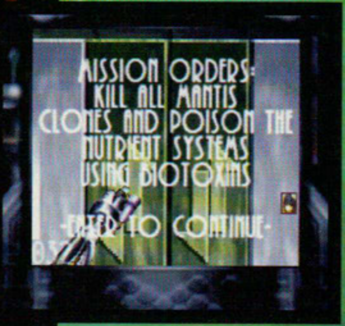




Moving between areas is relatively simple if you manage to find your way to a deck lift.



Now then, there's no progressing past this door until that orange keycard is found.



Continued overleaf ➡



These horrid spider-like creatures are just, well, horrid. You'll first meet them at the start of the game, and you'll wish you hadn't!









Another spider creature is about to meet its maker. The noise from your gun is bound to attract about a dozen of its brothers and sisters though, so stay on your toes and be prepared.



Your progress is impeded again. What's the betting there's a whole stack of ammo just waiting on the other side as well?

elements present in the game in the shape of ammo packs, extra weapons and energy boosts, *GS*'s level progression is fairly familiar.

Thankfully, the game doesn't allow you to pick up extra energy when you're topped up so you can come back for any packs you were unable to take onboard when you first found them – if you can be bothered to go and find 'em that is. Ouch, that's a bit harsh...

Essentially, you'll run around everywhere that's accessible, clearing any baddies out of the way, and then you'll concentrate on getting

> **"This means the familiar routine of finding and tripping switches and hoping they relate to the door you wanted..."**

through all the doors that were denied to you previously. This means the familiar routine of finding and tripping switches and hoping they relate to the door that you wanted (there's no small visual clues to show you what affect you've just had).

Like most of the better games of this type though, the enemies you face are never in their thousands. Sometimes you come across packs of them, especially the spider-like Face Huggers, but they're generally fairly spread out.

You're never going to be very far from something that needs killing, and you can usually guarantee that every new room or corridor you enter has at least one baddie.

However, the fewer and further between approach makes this much more of an exploration/combat game, rather than a straightforward DeathMatch-run-around-with-all-barrels-blazing affair.

And again, as you'd expect, there's lots of scenery to interact with. Fuel tanks, barrels of nuclear



You'll grow in confidence once you've found one of the game's better weapons.

waste and what have you can usually all be blown up (don't stand right next to them though, eh?). It's worth noting the placing of them as you're moving around the levels because they're often the keys to unlocking otherwise inaccessible areas, giving you access to goodies or areas which you wouldn't normally be able to get to. Let's take the first level as an example as it tidily deals with the game's saving structure too.

There you are on the first level, you've had a good look around, got into a couple of scraps and found enough ammo and health bonuses to make you feel like you don't really want to have to do it all again.

The game only allows you to save your position at certain points. There are these swirly white clouds in certain areas – enter the cloud and you're allowed to save your position.

On the first level you can see one of these clouds in a room. The weapon you've got at the moment isn't powerful enough to blow open the cage door (this can be done on certain doors on later levels if you've found yourself a powerful weapon).

However, there are a couple of fuel tanks nearby. Get the picture? Retire to a safe distance and fire a couple of shots into the fuel tanks. Hey presto, you've done what you're supposed to (cue Michael Caine, "You're only supposed to blow the bloody doors off!") and you can now safely save your game.

That doesn't mean you can walk into just anything though. Some things are extremely bad for your health and unfortunately you're

probably not going to know if it kills you until you walk into it, so err on the side of caution and assume everything's going to kill you.

If you really want to find out if those green bars are as painful as you think they might be, the best thing (obviously) is to try to save your game immediately before.

One thing *Genetic Species* doesn't do too well is allow you to carry different weapons. There are some exciting weapons to find, but say you come across some hand grenades when you're already carrying the Tazer (what a useless piece of kit that is – stun the guards a couple of times and in about one second they're back up and shooting at you – grr!) then it doesn't let you pick the grenades up.

Well, that's what happened to me, and I couldn't find a way to drop the Tazer so I had to go and use a keycard on a door that I didn't want to yet, simply to get a slot free so I could pick up the grenades.

And is it any fun to play? Mostly, yes. There are some annoying bits – you tend to be very bouncy when you're walking and running around and that can make targeting the baddies a little difficult at times.

Fortunately you don't have to be pixel accurate to kill off the enemies but it's easy to waste shots when you're moving and the last thing you want to do is run out of ammo. If that happens, you're stuck. Usually the only solution is to go and explore a new area of the level (which is bound to be crawling with baddies, just when you don't want it to be) and hopefully find some quickly.

OK, so maybe I've been a bit harsh on *Genetic Species* in places. It is a good game and though it's not *Quake*, at least it's playable on a machine that doesn't need all sorts of extras to get it running satisfactorily. The graphics are good throughout, though the baddies aren't generally the best drawn in the world and the animation is jerky.

There are some lovely effects, especially when you're shooting and blowing things up. The sound is fine but not outstanding, and the game plays as well as any of the other *Doom* clones that have appeared lately.

At the risk of getting Vulcan miffed though, I'm going to stay shy of awarding this a Format Gold. For me, the game just didn't have the atmosphere and tension a game like this needs. Sure, it's big enough, sure, it's tough enough and sure, it's fun to play once you get into it.

The unfolding storyline does help you become more involved but when you're actually playing the game you can't help feeling you've been here many times before.

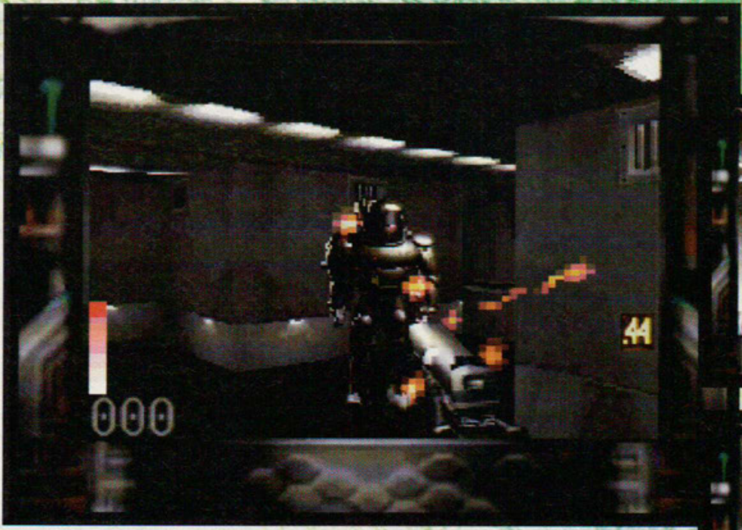
Alien Breed 3D II is, for my money, a better game. It may not look as nice and may not run as well on a lower-end machine but it was just more enjoyable to play.

If you've had your fill of *AB3DII*, if you just can't afford all the extras you need to get *Quake* (and any of its add-ons) to run, then I can certainly say you won't be disappointed with *Genetic Species*.

It's got everything that all good first person games should have and it's certainly hard enough to present a decent challenge to anyone (even on easy mode) and it's certainly well worth buying.

It's good but it's not an all-time classic, and much as I want to reward Vulcan for their efforts and much as I adore the glorious, long, animated intro at the beginning, I just feel it's lacking something.

The best thing to do is buy the game (you're going to enjoy it anyway) and then drop me a line and let me know whether you think I've been too harsh.





Shooting away at some of the baddies you meet on the first level (left). Keep that trigger finger itchy.



One of the game's computer terminals. Here you can call up the not particularly useful area maps.

WEAPONS



At the start of the game, not surprisingly, you've only got a weedy weapon. The Magnum .44 is certainly not powerful enough to blow holes in walls, but the fuel canisters next to them are…



Level two and life's becoming more bearable as you've now got a much better weapon. This one's powerful enough to blow holes in certain doors so don't be afraid to try it.



Level three and you'll get some serious hardware, which is just as well because there are some serious enemies to contend with. Keep an eye on your ammo levels at all times though, because no weapon is any good whatsoever without ammo.

PUBLISHER: Weird Science (0166 246 3800)
PRICE: £29.99
VERSIONS: A1200
REQUIREMENTS: CD ROM 4Mb
RELEASE DATE: Out now

GRAPHICS: ●●●●○
The levels are great and varied, but the baddies in the main are a little ropey.

SOUND: ●●●○○
Good speech and music and good sound effects. Don't wait for aural clues though.

ADDICTION: ●●●●○
Well designed levels for that 'I wonder what's down that corridor?' feeling. Good stuff.

PLAYABILITY: ●●●●○
Very simple to control. Everything's nicely redefinable too.

OVERALL VERDICT:
A great Doom clone that offers a new challenge, but not quite enough for an AF gold.

89%

Time of Reckoning

Andy Smith discovers there's even more to kill and maim with these Quake add-ons...





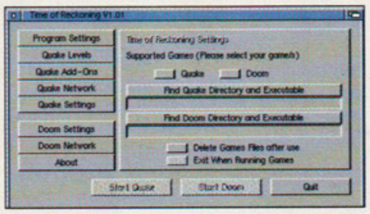
Doom II and who can resist the occasional flirtation with the chainsaw? It may not do too much damage, and it may expose you to unnecessary risk, but so what?!

Yes indeedy, winding up this issue's selection of *Quake* additions is Weird Science's collection of bolt-ons. It may be the last one of the month but you can bet your bottom dollar we'll be seeing a lot more of these over the rest of the year.

Time of Reckoning contains additions for three games – the rather lovely *Duke Nukem 3D* (which isn't actually available on the Amiga, so that part of the CD is completely wasted, really), the glorious *Doom II* and the seminal *Quake*.

Let's have a look at the *Doom II* stuff first. There's a total of 500 WAD files on the CD, 250 new Deathmatch levels which, again, are going to be wasted on most players and 250 new single player levels.





The lovely interface that enables you to set things up quickly, neatly and efficiently.

There are also a whole bunch of new monsters and new weapons included, all of which should extend the life of your original game (which is needed) by several months. Good stuff, I'm sure you'll agree.

Then there's the *Quake* stuff. Unlike *Malice*, which is more of a new game using the *Quake* engine, the bits and pieces on *TOR* simply add to the *Quake* experience without actually changing the flavour of playing the game.

That's not to say there isn't a whole load of stuff to play with as there are some 260 Deathmatch levels but, more importantly, there are 84 new single player levels to explore with 88 new weapons to try out. Some of these are modifications of the existing weapons – you want the Super Nailgun to be more devastating but have a slower firing rate? You got it. Others weapons are completely made up.

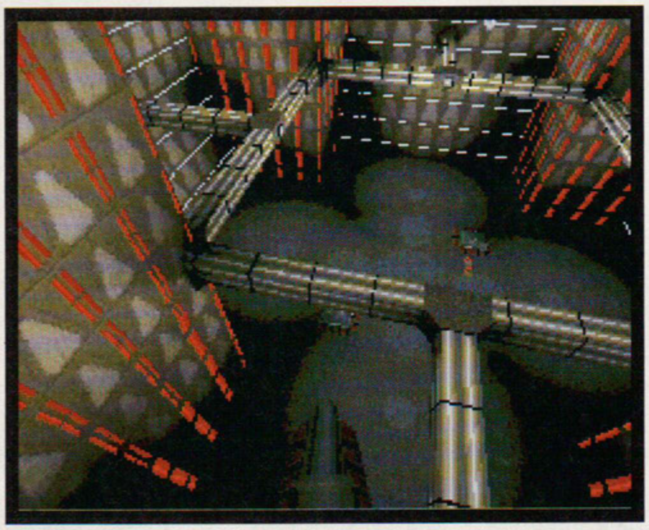
So why should you be paying for all this stuff? After all, there's loads of WADs and weapons freely available over the Net, isn't there?

Well, yes, but Weird Science have taken all the leg work out of getting hold of the good ones and they've made it easier for you to use them by including a floppy disk which helps with all the installation and set-up.

Getting new weapons and levels to load in is very easy (once you've told the program where to find your installed game), so good on 'em.

Does this make *TOR* an essential purchase then? Not really. It's good, but for my money you're better off spending the £15 on *Malice* first and then the £20 for *TOR*, and then it's only good value for money if you've got a copy of both games.

Anyone who doesn't have Internet access will find it a valuable source of extras, though, but don't be surprised if new CDs start appearing that offer even better value for money.



One of the stranger Quake levels. This one's called Airtime and is all about you swinging around the place. Some people will love it, some people will hate it.



It's just what every Quaker (is that what they're called?) wants – new levels to explore, new monsters to meet and new weapons to use on 'em.

PUBLISHER: Weird Science (0166 246 3800)
PRICE: £19.95
VERSIONS: AGA/GFX card
REQUIREMENTS: Fast machine with FPU and CD
RELEASE DATE: Out now

GRAPHICS: ●●●●●
As good as the original because everything's created using the original source code.

SOUND: ●●●●○
Most of the sounds are as splendid and as scary as you'd imagine they would be.

ADDICTION: ●●●●●
Some levels are more fun than others but you'll still be hooked.

PLAYABILITY: ●●●●○
Everything's still configurable so you can make it as easy to control as you'd like.

OVERALL VERDICT:
Lacks the gameplay changes of Malice and a lot of the CD's not much use without a network, but still well worth looking at.

80%



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ON THIS MONTH'S CD

AFCD28:-ReaderStuff-/-ReaderGames-

Come with us to the Amiga games' equivalent of a car boot sale. It is, of course, the...

Reader Games

"You don't have to be beautiful to turn me on", goes the song and makes a nice, but tenuous, intro line for the section of the magazine dedicated to the real champions of Amiga gaming – you, the *Amiga Format* readers.

What these games lack in visual and aural quality they make up for in enthusiasm. Gameplay rules here, not whether the game's got fabulous rendered characters or stunning scenery, but whether it's actually any fun to play. All of these games are written by our readers who merely want to create a game that's fun.

The idea here's not to rip 'em to shreds simply because they're quite obviously home-made (though even we can't resist that occasionally) but to offer help and advice on how the authors could improve them.

There's also a lovely £50 prize awarded every month to the author of the best game, so if it takes more than just some encouraging words and the chance to show thousands of other Amiga gamers what you can do, there's a financial incentive too.

One thing to bear in mind when you're sending your games in is that they must work as stand alone programs – there's no point sending in a game that requires you to boot up Amos first or whatever (oh believe me, we get 'em) because the games are featured on our CD each month and we have to assume our readers don't have specific software programs. But still, on to this month's lovely selection...

£50 AF Winner!

UFO ENEMY UNCLOTHED

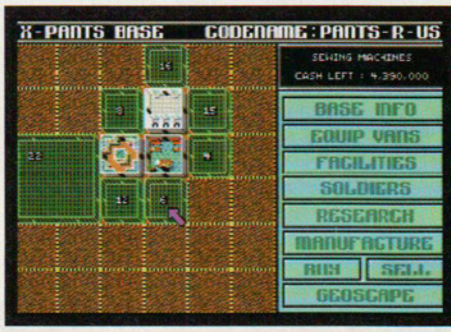
What a timely submission this is! After we gave away the wonderful *UFO: Enemy Unknown* a couple of months ago, I receive this absolutely great spoof.

The game follows the same premise – build up a base, recruit designers (to design new pants) and machinists (to make 'em) and soldiers (to catch the flashers) and then go and catch flashers! In full *UFO: Enemy Unknown* 3D battle environment. It's absolutely stunning.

Thankfully Simon's avoided the temptation to be crude and has kept the flashers fairly discrete (though still funny).

Everything in the main game (just about) has been included – you've got to expand your base(s), keep the various neighbourhoods happy or they decrease their funding and constantly keep researching and upgrading your weapons (advanced pants?) and your pursuit vehicles (clapped-out old bangers to start with, complete with lawnmower engines). This is terrific stuff.

Although we featured this game on our CD on the Christmas issue of *Amiga Format*, we've included it again because this time it's the full game.



You've got to have your sewing machines if you're going to be making new pants for the flashers you catch. Bizarre? Yup.



Though the interface is a little awkward at times, especially when you're trying to fire fig-leaves at the flashers, it's one of the most polished games to appear in Reader Games yet. OK, Simon's not going to win any prizes for originality, but he does for being able to include all the elements from the game he's 'inspired' by and making it work just fine. Cracking stuff and well worth this month's Star Prize. Enjoy.



AUTHOR: Simon Hitchen
lANGUAGE: Unknown
VERDICT: A fabulous spoof of a top quality game. It's a little awkward at times but generally this is just fabulous. Congrats Simon, let's have the next spoof (or original game if you fancy it) as soon as possible.

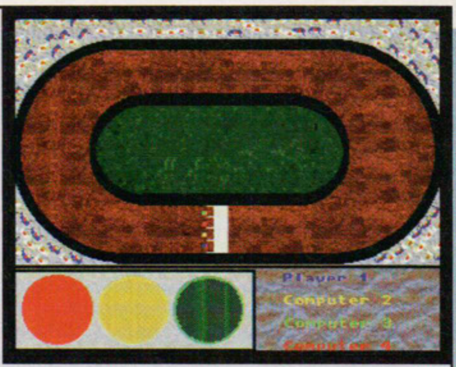
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CRAZY SPEEDWAY



Here's a game that could only exist in Reader Games. Any of you remember the fabulous *BMX Simulator* from Codemasters on the C64 or Spectrum? Good, because this is pretty much the same, though without the interesting courses.

You and up to three mates chase around a speedway track on little coloured, erm, things. Obviously they're supposed to be bikes but, well, look at the pictures. There's no collision between the bikes (even when you're in Snake Mode) but just the slightest contact with the inner or outer walls ends your race.

And that's your lot really. Simply keep turning left and hope to cross the line first (there's an option that allows you to turn right as well, but it's not as necessary as you'd imagine). There are some nice touches here – ripping up the dust a la *Skidmarks* for example, and being able to change the angle of the banking, not that it makes a visual difference.

If you manage to persuade a couple of mates to join in it's a lot of fun (the computer opponents tend to crash most of the time).



And this is your bike in snake mode. Crossing tails doesn't matter but don't hit the sides.

Better sound effects would have helped as would decent tracks as the couple included aren't up to much. *Crazy Speedway* is too basic to entertain you for long but it's got potential because a lot more can be added to it. As it stands, it merely reminds me why I loved *BMX Simulator* so much and it makes me want to go and play that.



AUTHOR: Nicola Piotrowski
IANGUAGE: Amos Pro
VERDICT: Some nice touches but it's too basic to keep you playing for long. The game seriously needs more, and varied, courses.

YTZ PRO

We don't often get games as lovely-looking as this one. OK, so it's *Yahtzee*, but it does look very nice.

If you've never played *Yahtzee* before then apparently you're missing out. I say that because I'm not a fan of the game. The idea's something to do with rolling dice and making poker hands out of them – three of a kind, full house, that kind of thing.

Just because I don't like *Yahtzee* doesn't mean I don't like this, though. You and up to three mates can all play (and there's a great one player mode if you can't rustle up a couple of chums – ooer!) and simply take it in turns to score as much as you can with your three throws, bearing in mind that once you've scored your full house you don't get any points if you score it again, so it can get quite tactical.



The only improvement really needed here is a better way of displaying the text – it's a little hard to see clearly, isn't it?

Like I say, I'm no fan of the original game so you'll have to forgive me if I'm glossing over the finer points of it.

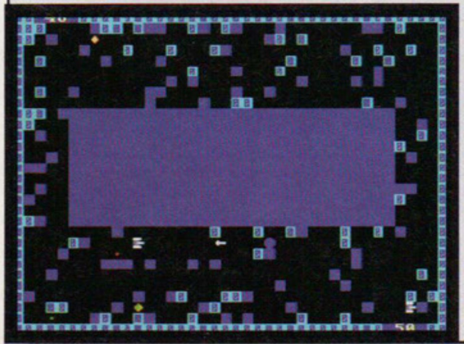
The sound is good, the graphics are good and it plays extremely well. This is probably about as good a game of computer *Yahtzee* as you'd want. The only thing I'd change would be the text. It can be a little difficult to see the scoring because blue numbers on a darkish background are not the easiest to see.



AUTHOR: Jason Phelps
IANGUAGE: Amos Pro
VERDICT: A fine *Yahtzee* game. You'll like it if you like playing *Yahtzee*. A couple of text improvements would have added to an already very good game.

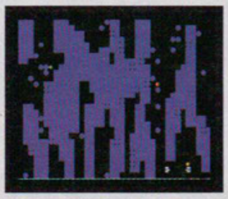
SUPERTANK PRO

This is a familiar game type to appear in Reader Games – the two player only tank battle game. And, just like most of the previous submissions in this genre, it hasn't moved on much from the Atari 2600 *Tank Pong* game that inspired it.



Tank Pong is arguably better though, because you had to bounce your shots around the enclosed arena to hit the other tank, whereas here you simply have to get lined up with them to blast 'em to bits.

This sounds a lot easier than it is because the mazes that fill each arena are a little complex. Blue squares and circles block your way most of the time and if you can't go round them you have to blast your way through them. There are collectables randomly scattered through the mazes that allow you to freeze your opponent, gain extra shots and so on and so forth.



Trundle, shoot, trundle, shoot. This isn't the most exciting thing in the world, I'm afraid, and it's unlikely you'll get carried away playing it.

Sadly, the bonuses don't stay on screen for long enough for you to pick up. You might see one and go scuttling after it only to get halfway there before it disappears and reappears somewhere else. Grr.

The game's starting speed is way too high (on my A1200 anyway) unless you change it through the options screen (it's unplayable otherwise) and you can't fire if you're right up against a wall so there's a lot of tedious 'trying to get one square away so I can shoot' manoeuvring. Grr. Though it's adequately coded these little niggles quickly destroy any short-term fun you might have had.

AUTHOR: Terje Christiansen
IANGUAGE: Amos Pro
VERDICT: An old game type that's been reinvented with some worse bits. Not a huge amount of fun and certainly nothing to get too excited about. Sorry Terje, but there's a lot more work needed here.

GameBusters

Final Odyssey part 4

After the massive guides to the first three parts of Vulcan's excellent Final Odyssey, you'll be pleased to discover the final two parts are really simple. Andy Smith takes your hand and helps you through them and then starts you off on a fab guide to the wonderful Myst...







After struggling through the first three levels, you'll be relieved that the last two are relatively quick.

LEVEL FOUR

Levels four and five are a much greater combat challenge. Take the following exits to reach the end of level four. The direction tells you which exit to take i.e. 'right' means take the right exit to the next arena.

▼ Take the bottom exit to the next arena and then go down and take the bottom exit again. Go right, go up and get through the random maze (you should know how to do this by now...) before going right, then down. You need to pick up the key that's in this arena and then go back up.

> **“Dodge the rolling rocks, stay towards the back of the arena and fire at him from a distance... he tends to throw fireballs...”**

▼ Now go left, down and left again. Take the bottom exit and then the right one. Open the fourth door with the key and collect all the other keys you'll find there. Open the last door and take the right exit. Go down. Go to the bottom right of the arena and open the door with a key and take the right exit.

▼ Take the transporter to the secret room and open the door with a key. Take the transporter in this room and then take the bottom exit. Head right. Take the bottom exit and you're ready to start level five!

LEVEL FIVE

Get the key and take the top exit. Head up again. Get through the random maze and head up again. Then up again. Then right,



The monsters are tricky here as they're mostly transparent. Keep your wits about you...





It might look quite tricky, but just remember that the end is finally in sight...

down, right, down and right. There is a section of the castle with cracked walls. Blow it up with a bomb to get through it and then head up again.

▼ Now go left and then up. Walk up to the picture with a black monster on it and the wall will disappear. Take the left exit. Head up and then left.

▼ There's a food bonus here but make sure you get the potion first. Take the right exit. Head up and get yourself through the random maze. Walk through the walls and take the left exit, then head left again. Dodge all of the arrows and continue towards the left exit again.

▼ Now go down. There is a series of arenas here that look identical. Each time you take the bottom exit it appears as if you are still in the same arena. You're not, so keep going down until you find the key and then return to the top. When you get there, take the right exit. Head right again. Open the door with the key and head right for a third time. Now go down, right and down.

▼ Walk through the wall on the right. The wall next to the window can be pushed out and moved around, so push it and get the key from the next room. Open the door at the bottom and take the right exit. Now go up and get through the random maze again. Go left and take the transporter into the room with the Minotaur inside.

▼ Dodge the rolling rocks, stay towards the back of the arena and fire at him from a distance. If you get too close he tends to throw fireballs at you. If you've got some chaingun ammo left then use that because the Minotaur is really tough.

▼ Don't move around too much if possible because there's a lot of Goolyns around. It's easier to say than do, but kill the Minotaur and that's it – you've completed the game!





Working your way through the random mazes is never easy, but persevere and you'll get to the end.

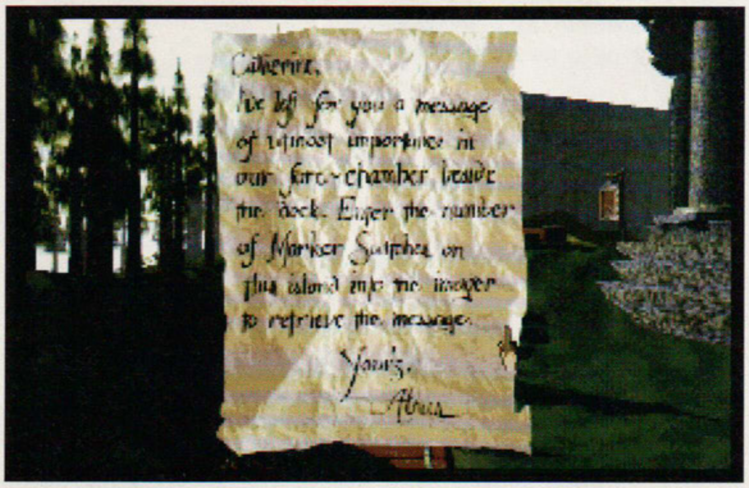
Myst





Enter the number of markers on the island and then watch the message on the projector behind you.

Here's the first part of a bare essentials guide to getting through *Myst*. The true goal of the game is to explore everything and discover all the secrets of Achenar, Sirrus and the worlds you're in. All of the puzzles can be solved, but if you find yourself spending weeks on the same puzzle you're obviously doing something wrong. The solution may not be obvious though, which is where you'll find this guide extremely useful.



Your first clue in the surreal adventure that is Myst. Enter this world and you'll be trapped for weeks.

THE START

Pick up the note in front of the planetarium. As you explore the island, you'll find that there are eight marker switches scattered around the place. Turn these on (to the up position) as you wander around.

> Each of the marker switches on the island lights one specific group of buildings on the map. Grab the tower and rotate it...

▼ At the very start of the game there's an entrance to an underground room. Go to the projector and turn it off by pressing the big button at the bottom. Turn around. You'll notice a piece of paper on the wall to the left. Press the green button on the upper left corner

continued overleaf ➡

Helping Hands

CREATURES

Dear AF,

I have been playing Creatures for ages and still can't get past the second torture level. Have you got any cheats?

Jim Shirley, Paisley

Here you go Jim: Pause the game and type 'A FINE KETTLE OF FISH'. This gives you infinite lives and the use of the following keys:

- *F1 Stage 1.1*
- *F2 Stage 1.2*
- *F3 Torture 1*
- *F4 Stage 2.1*
- *F5 Stage 2.2*
- *F6 Torture 2*
- *F7 Stage 3.1*
- *F8 Stage 3.2*
- *F9 Torture 3*
- *F10 Skips to the next level*
- *C Turns the cheat off*

BANSHEE (AGA VERSION)

Dear Helping Hands,

Have you got any cheats for Banshee? If so, could I have some please?

Aaron Wearing, Burnley

Certainly Aaron, certainly. On the title screen, or during the intro, type FLEV17 and press Return. This will give you infinite lives. Use the function keys to skip levels. The screen will flash to let you know that the cheat has worked.

For a bit of a giggle, on the title screen, or during the intro again, type I AM EXQUISITELY EVIL and press Return. This will change the names on the high score table and you can kill polar bears and people. The screen will flash letting you know the cheat has worked.

HEIMDALL2

Dear Amiga Format,

I'm stuck in Core Design's Heimdall 2. I can't pass the guard who's on the bridge at Rurik's village.

Johnny Zigiridis, Greece

Well Johnny, by the sound of it you're right at the start of the game. When you're walking along the magical bridge, simply jump down from the ledge on the right when you come across the guard and then walk through the tunnel to Rurik's village. Hope that helps.

← which will then reveal a hidden control panel. Enter the number of switches, 08, and press the button to close the panel and then turn the projector on again and watch the message to Catherine.

▼ In the library, each wall contains something interesting. Give the blue and red pages to the corresponding books and discover that each brother wants more pages. Read the four legible books in the bookcase and, for the moment, ignore the book with the weird squares on it. Copy down any interesting diagrams from the books you read.





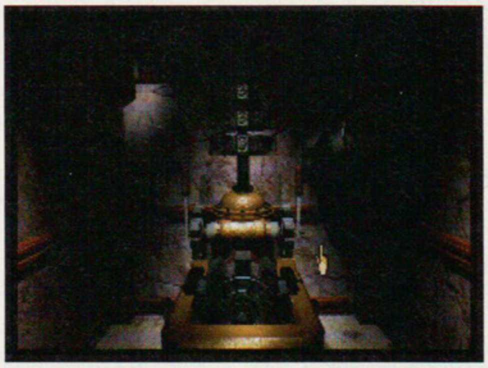
The ship raised in the fountain means the ship's raised back at the dock. Go check it out…

▼ Look at the map on the wall. Each of the marker switches on the island lights one specific group of buildings on the map. Grab the tower and rotate it until it flashes red and then stop. There are four red positions, each one indicating where one of the four available link books is hidden (in the ship, the giant tree, the gears and the spacecraft).

▼ The paintings next to the bookcase open and close the secret passageway behind it. Go to the elevator, close the door and press the button to go into the tower. If you rotated the tower correctly, the ladder with the book on it should show you where the book's hidden while the ladder with the key on it should lead you to a clue to the puzzle that lets you actually get the book.

Ship:

Go to the planetarium, turn the lights off and sit in the chair. Click on the control panel and set each of the dates from the clue: Oct 11, 1984, 10:04am; Jan 17, 1207, 5:46am; Nov 23, 9791, 6:57pm) and map the constellations shown to one of the constellations in the Stoneship book. Go to the pillars at the mall and click on the appropriate symbols: leaf, snake and beetle. The ship at the dock will now resurface and the book can be found in there.



Tree:

Go to the wooden house and enter the combination for the safe next to the door: 7, 4, 2. Open the safe, get the match and light it with the matchbox. Turn around and light the pilot light below the boiler. Turn the gas wheel all the way up (green icon).

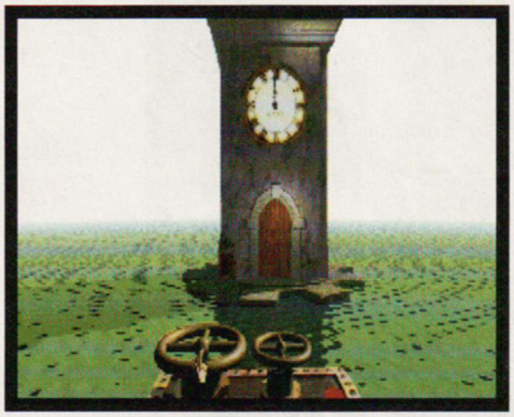
▼ Wait until the thumping stops and then turn the wheel all the way down (red icon) and quickly get out of the house and run to the tree on the right (down by the side of the house) before the lift in the tree goes underground. If you can't get there fast enough, try again but this time don't turn the gas all the way off.

▼ The book is down below the tree. If you went up in the lift, press the white button on your left as it releases the steam and allows the tree to drop to the underground level.

Gears:

Go to the clock house, enter 2:40 into the clock using the wheels and then press the button. Go into the clock and use the levers to set the wheels to 2,2,1. Hold either front lever down to rotate the middle wheel only. Click on the vertical lever to your right to reset the puzzle. The book is in the giant gears close to the pier.





Turn the wheels to move the clock hands and when you've got it right a walkway to the tower appears. Intriguing, eh? You'd better believe it…

Spaceship:

Go to the brick building, set the generators to send out exactly 59 volts out (you'll find buttons 1, 2, 3, 6, 7, 8 and 10 should do very nicely).

▼ The numbering order is on the wall as you leave the control room. In order to figure out which button has which voltage, just hit them one at a time. If you go over 59 volts you'll blow a fuse. There are two electricity towers to climb, one next to the brick building and one close to the spaceship. Click down the breaker switches. Then enter the spaceship.

▼ Play the notes from the Selenitic Age book in the organ, and set the same notes in the controls of the ship. If you're tone deaf, just count the number of notes from the bottom (8, 20, 23, 13 and 6 respectively, including the bottom as one). Press the button and the book will appear before you.

And that's a very good place to leave you for the moment, before continuing with this massive guide next month…

SEND US YOUR TIPS!



If you've got some hints, cheats, tips or general good advice on any Amiga games – especially some of the newer ones like Uropa2, Bograts or whatever, then don't keep 'em to yourself – send 'em in so we can pass 'em onto other gamers who might be having more problems than yourself.

Also, if you've got a query about a game (and, no, I don't really mind people asking about The Secret of Monkey Island), then drop us a line and we might be able to answer it in Helping Hands.

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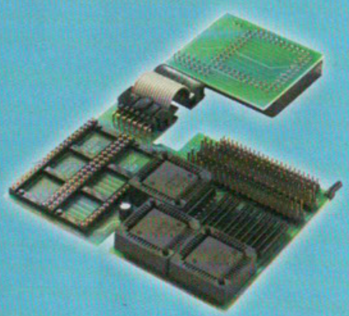
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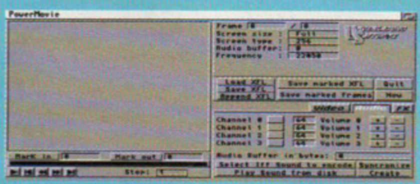
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PD Select

Dave Cusick ploughs methodically through the latest sackful of the best PD and Shareware stuff.

The Bloog

BY: NC Gamez
WARE: Mail
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: One
PRICE: £1 plus 75p P&P





Let this be a warning, kids – don't wander into big towers you've never seen before that say "Do not enter". No good will come of it, mark my words.

Lame plot at three o'clock: Bloog, ever the fresh air freak, was engaging in his regular early-morning perambulation through the immediate environs, when all at once – ping! – the shopkeeper appeared. No, that's not right. All at once, he caught sight of a phenomenally tall tower he didn't happen to have cast his eyes on before.

Presumably after some frightening experiences, the details of which we can only vaguely speculate upon, some benevolent soul had kindly attached a sign to the tower door proclaiming that "This is a deserted maze. Do not enter!"

Unfortunately for him (and, indeed, for you, since as the game player you are the one who has to pick up the pieces), Bloog was either having an incredibly bad brain day or else had a deep-seated hatred of authority. He not only resolved there and then that he would enter the tower and see what it contained, but he even ripped the sign down and destroyed it – which was a pretty irresponsible thing to do, really.

THE WORD #18

Despite opening with a nicely drawn but pretty sad loading screen featuring a topless woman with a chainsaw bearing the legend "Girl Power?", issue 18 of *The Word* is a typically polished edition of this well-established diskmag. Amongst the more notable articles are a retrospective of the development of the Amiga scene in the UK and a sensible list of suggestions for a new Amiga machine, if one ever actually appears, but there are several other worthwhile pieces too.

Tellingly though, the four game reviews are all of PlayStation and PC titles, and there's even an article giving tips for installing Windows 95 on a PC and a three-step guide to building your own PC. To a small extent this is counterbalanced by the inclusion of a collection of news stories detailing the dubious exploits of the man many have alleged (and attempted to prove through ASCII codes!) is in fact the antichrist, Bill Gates.

Not all the articles in The Word are computer-related. There's a fairly pointless article praising the NatWest bank, a rather more interesting discussion on the merits and drawbacks of shopping at electrical chain stores such as Dixons and Comet, the full text of a letter HRH Prince Charles sent to *The Big Issue* magazine and more besides. There is also a humour section containing the sort of stuff that everyone who has ever had an email account will be more than familiar with ("real life exam answers", that sort of thing) as well as some amusing personal experiences.

I can't say I'm keen on the way the program flashed the power light on my A1200 periodically, the music is pretty dire in places and the less said about the floorplans of contributors' bedrooms and one bloke's ode to his local Tesco store (which is apparently well populated with attractive members of the opposite sex), the better. Other than that, though, there's much to commend on these two disks, and issue 18 of *The Word* makes for an interesting, if not entirely essential, read.



Girl Power, eh? How come you never see the Spice Girls topless with chainsaws and phallic pipes then?





BY: Various
WARE: Free
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: Two
PRICE: £2 plus 75p P&P

ICON POET

Selection of the month

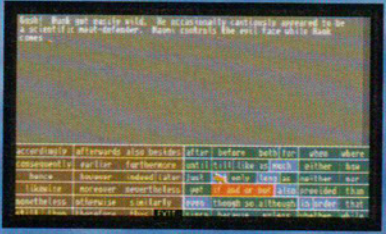
Creative writing isn't as easy as it might seem. Sitting down to churn out three pages of PD reviews each month is something of an ordeal – for all the good software that's out there, it still takes the thought of a pay cheque to cover those lingering debts to finally motivate yours truly into action, and you can bet that the deadline will be looming over my head by the time I manage to summon the willpower to fire up my word processor.

And that's all just for something as intellectually undemanding as cobbling together 2,400 words on cheap and cheery software.

Imagine the discipline that would be required to write a novel. Of course, creative writing isn't just about telling stories. For centuries, creative types have been producing poetry and songs and using language in new and challenging ways. As BBC2's series *The Nation's Favourite Poems* demonstrated, people have been inspired, moved or simply amused by an extraordinarily diverse selection of creative writing over the years.

What's more, the apparent simplicity of composing poetry lures many of us into trying our hand at this noble art. How many people living through their teenage years in the last half century can honestly say that they have never attempted to compose a poem or a song?

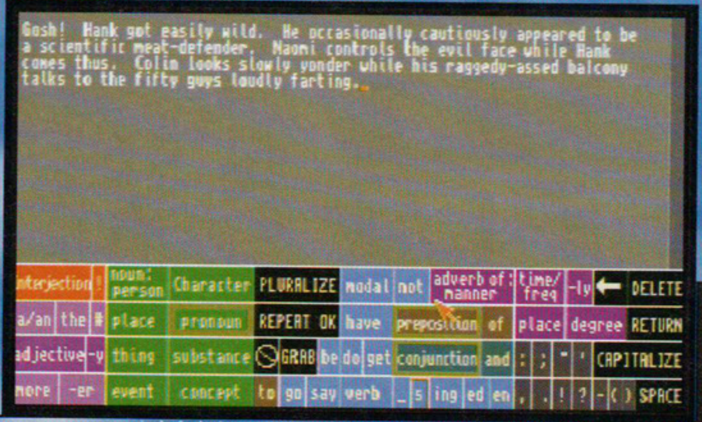
Whether a work is created as a means of expressing deeply personal thoughts, as a means of venting emotions, or as a light-hearted joke at the expense of serious poets everywhere, poems play a part in all our lives at one time or another.



Producing a decent poem takes a great deal of time, a startlingly adept grasp of the language and an enormous outpouring of effort. *Icon Poet* may not be able to supply the former or the latter, but it can certainly suggest a few words you might like to incorporate into your masterpiece, should your creative flow begin to peter out.

The program presents you with a grid of grammatical terms. By clicking on a term you can add a word to your composition, which is displayed at the top of the screen. You can type things in yourself, but the idea is that you guide the machine and it does the actual writing by picking a suitable word randomly. As programmer Steve Tiffany explains in the documentation, "It's like the machine is your co-author – you supply the structure and the program suggests the content."

Traditionalists may balk at the very notion of a machine helping an individual create a piece of work, but songwriters have been using rhyming dictionaries for years, and I'm sure I am not the only journalist in the world who views his thesaurus as an absolute godsend, so to those traditionalists I say this: balk away. See if I care. To be honest, Icon Poet can produce some rather bizarre results, but that is part of its charm, and to a certain extent it is not really intended to be an entirely serious program. By playing around with it, budding poets will be able to create some quite offbeat compositions.



Hmm. It's not exactly Sylvia Plath, but it is quite amusing nonetheless...

BY: Steve Tiffany
WARE: Free
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: One
PRICE: £1 plus 75p P&P

Just imagine the consequences if some small, over-curious child were to stumble upon the tower and decide to enter, to wreck the inside or to use it as a base for an elaborate drug-pushing operation or Gonch Gardiner-esque scam. Anyway, I digress.



Keys and bricks and mazes... sounds like a fairly average arcadey, puzzley sort of game to me.



The bottom line is that Bloog's stuck in a ten-level maze (although it's not a particularly maze-like maze... but that's neither here nor there). To progress from one level to the next, Bloog must find a set of keys. Some are scattered about the screen for all to see, but others are more cunningly concealed within coloured bricks.

Smacking two bricks of the same colour together causes them to disappear and reveal a hidden key, but if two bricks of different colours collide then one will disappear whilst the other remains intact. Bloog can repaint blocks by collecting various bonuses.

To be honest, *Bloog* is pretty standard arcade-puzzle stuff, but it's quite well done and it offers a decent enough challenge. It didn't seem to like most of my favourite screenmodes, but life can be cruel like that sometimes.

World News

BY: Danny Y Wong
WARE: Shareware
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: One
PRICE: £1 plus 75p P&P

World News is a well designed, fully-featured Usenet newsreader, from the chap responsible for producing the often overlooked email client *AirMail*. Like so many Amiga programs these days, particularly those designed for use on the Internet, World News makes use of Stefan Stuntz's Magic User Interface.

The program comes in archived form, so you'll have to extract and install it before you can give it a whirl.

Once up and running, *World News* offers access to its main sections through a simple, six-option menu window, and as with all MUI software

Continued overleaf ➡

the design is such that a number of windows can be open simultaneously. This means that, for instance, you could rearrange your message folders while halfway through composing a news posting. The standard Workbench right-click Menu offers access to the program's other features.

There is scarcely a single option available in *World News* which cannot be altered with a couple of clicks. With most news clients, the first time you run the program you will have to wait for an absolute age while your machine downloads a list of available newsgroups from your ISP.

Once you've done this you'll never have to undergo this arduous ordeal again – unless you experience a nasty hard drive crash and lose your painstakingly slurped list, which just doesn't bear thinking about…

With *World News*, however, a list of newsgroups can be installed along with the program if you prefer, meaning you can get straight into configuring the program to suit your system. Within minutes you can be reading and posting news articles, which makes for a refreshing change.

In use, the program is extremely intuitive and it performs well overall. With an *AirMail*-compatible address book, support for UU and MIME encoding and sufficient other features to make online or offline newsreading and posting a breeze, this is a polished piece of software. Perhaps the only thing that *World News* has against it is that some email clients, such as Olli Wagner's *Microdot-II*, already double as highly effective newsreaders.

In the end I suppose it is down to personal preference whether you choose separate mail and news clients or opt for software which combines both of these roles.

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Bogue

BY: Knightcoder
WARE: Free
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: One
PRICE: £1 plus 75p P&P

Bogue had to be included, if only because it reminded me of my time spent as a PD columnist for *Atari ST User* magazine, many moons ago. Why did it bring back such vivid memories? Because the main sprite flickers badly, the scrolling is rather jerky and the graphics are mediocre at best.



The basic objective of *Bogue* is to blast various badly drawn computer hardware boxes with a string of stars, as you scroll from left to right through a bizarre cavernous world. What the gameplay boils down to is holding the fire button while trying to dodge passing blobs.

On the plus side, despite its wibbly nature, the theme tune is a good deal more tuneful than the atrocious "melodies" often found in PD games.

Bizarrely, *Bogue* is also oddly playable in a sort of retro-eighties way, bringing back memories of playing games like (the rather more sophisticated) *R-Type* in monochrome on friends' Sinclair Spectrums. And it's much more fun than *Patience*.



Left to right scrolling retro arcade shoot-em-up action that's better than *Patience*.

MAGIC CARDS

To my mind, *Patience* is the lone person's *Noughts and Crosses*, the sort of game that someone only plays when there is absolutely nothing else to do. In my youth, caravan holidays were an ideal opportunity to hone my *Patience*-playing skills: when you're stuck in a box in a muddy field, usually in the middle of a valley in which radio reception is appalling at best, invariably during the wettest bank holiday weekend of the year, you're actually glad of a pack of cards.

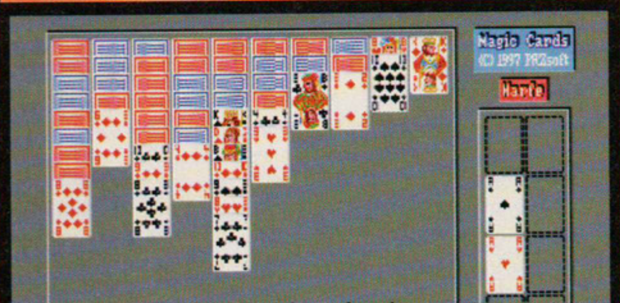
In the real world, I can't remember the last time I played cards without there being lots of alcohol and at least a small amount of money involved. I certainly wouldn't dream of playing *Patience* of an evening, I have to say.

Nevertheless, it would seem that in at least some parts of the world there are people who like nothing better than sitting playing *Patience*… and for some of them, a humble pack of playing cards isn't good enough. Oh no, printed wood pulp will never do. Only a computerised version of patience will suffice.

Forgive me if I'm being overly cynical, but I really do wonder what the attraction of computerised *Patience* could possibly be. It's not the sort of thing you could play anywhere because you need a flaming great mass of hardware to run the darned thing. It's not the sort of thing you'd want to fire up after a late-night word processing session, because even if your eyes aren't completely bleary from gazing at your monitor for too long, the chances are you are going to be in the mood for something either a whole lot less mentally taxing (step forward *Doom*), or at least something engaging and strangely therapeutic (this means you, *Tetris*).

Still, if you don't subscribe to my way of thinking on this issue and you are not averse to the idea of computerised *Patience*, the chances are you will enjoy *Magic Cards* thoroughly. It's got decent enough graphics, the control system is responsive and straightforward and the sound effects are bearable, if a little unexciting.

There is only one form of *Patience* available in this demonstration version of the program (the full version has oodles of them) but that's quite enough for most people. Even most of it being in German doesn't detract from the fact that this is a fairly good implementation of the game. I suppose, it's a case of whatever happens to float your boat…



It's *Patience*, only without the cards and with a computer. Perfect for those of you with no friends or no copy of *Quake*.



BY: Frank and Stefan Przybylski
WARE: Demo
PD LIBRARY: Classic Amiga Software
NUMBER OF DISKS: One
PRICE: £1 plus 75p P&P

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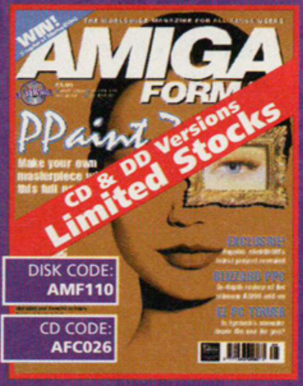
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Looking at the whiteboard I have behind me which shows the products that we are expecting or have in for review, I can see that, once again, it's full to overflowing.

I have to write in very small letters in order to be able to fit in everything that's coming out and coming to us.

If developers are releasing new versions of their software and hardware in what is traditionally the slackest time of the year in the computing industry then that can't be a bad thing.

Anyway, there's enough in this issue to be getting on with, including a review of *PageStream 3.3a*, requested by a reader who was concerned because we hadn't looked at it yet!

Ben Vost

AMIGA FORMAT'S REVIEW POLICY

...is very simple. ***Amiga Format*** is staffed by some of the most experienced Amiga users in the world and what we say goes. OK?

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90+%	The crème de la crème. Only the very best, most versatile and effective products are awarded an ***AF Gold*** – the most highly prized rating there is.
80-89%	These products are very good, but there are minor flaws or areas that could be improved upon.
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DOpus Preview

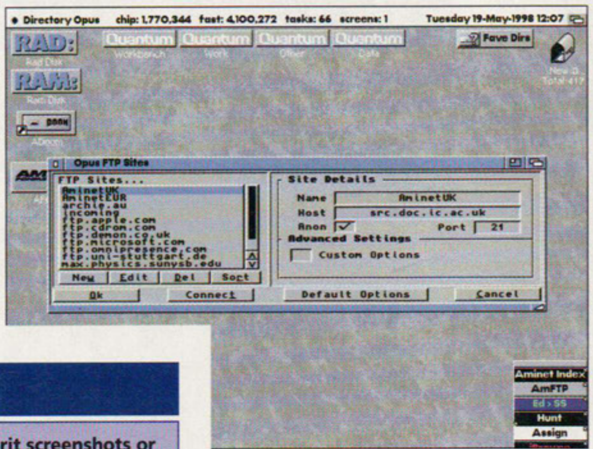
Ben Vost gives you an exclusive sneak peek at the brand new version of the world's best file management software.

Mention Directory Opus, or DOpus as it's better known, to anyone with an ounce of nous on the Amiga and their eyes will light up. They're probably already running DOpus Magellan as a Workbench replacement and have things beautifully set up so they can double click on any file type and the appropriate action will take place, whether it be playing an animation or sound, or viewing a picture or text file. Not only that, but if this DOpus user is on the net, he or she will probably have experienced GPSoftware's excellent technical support and willingness to pay attention to suggestions from users, which have resulted in the improvements we've been shown today.

> *The new version of DOpus has got so much going for it that we don't really want to give the game away too much…*

Now, look at the headline at the top of this page. This is a preview of the next version of DOpus, which we are very privileged to be able to share with you after a lot of time spent persuading GPSoftware's head honcho, Greg Perry. The features shown here might not be in their final state and there will almost certainly be more added to the software before its release, but take a glance and you'll see the shape of things to come…

As you might expect, on the surface DOpus doesn't seem to have changed much. The listers still look the same, the title bar still… hang on. Look at that screenshot carefully.

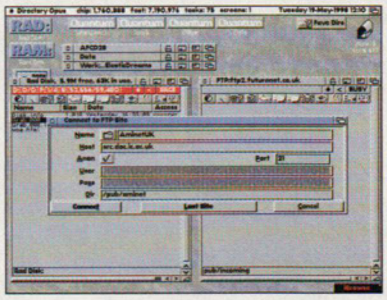


DOpus' new FTP address book. You can customise how each of your FTP sites looks, which wasn't previously possible, and you can drag and drop sites onto buttons or onto the desktop in order to give you shortcuts to FTP sites.

Okay, we might have altered it in a paint package or using MCP but we can assure you we didn't, and if you think that's funky, get a load of the new-look Environment editor that we used to edit it (right).

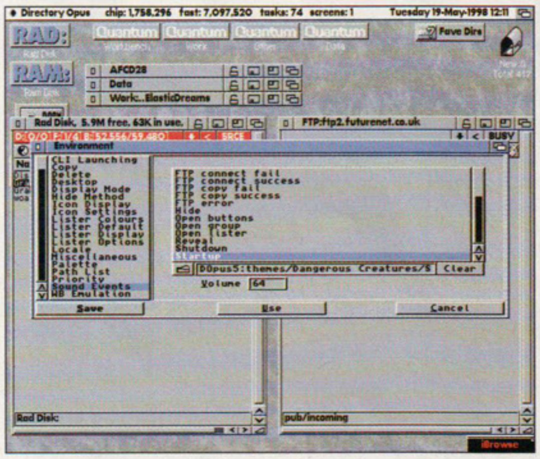
As of this version of Opus, there is no longer an additional "Options" editor as all the options are clustered together in this one requestor.

Starting at the top of the listview, you can now have random backgrounds for DOpus by simply putting a wildcard in the text field; the icon settings have been increased but made easier to select; you can now zoom a window to its title bar, like a Workbench Preferences program; and the custom screen title bar can now be configured in the Miscellaneous settings. There are lots of different variables that you can call, from memory to processor usage, from the number of screens running to a display showing the phases of the moon!



Connecting to an FTP site is also much nicer now in DOpus, particularly with the addition of a "Last Site" button.

There's a new paths module that allows DOpus to use paths properly and a much better way of adding sounds to events. It all looks frightfully complicated to use but you soon get used to it and I for one would hate to lose some of the configurability of Directory Opus for the sake of making things clearer. However, perhaps GPSoft need to do some work on this side of things as well.

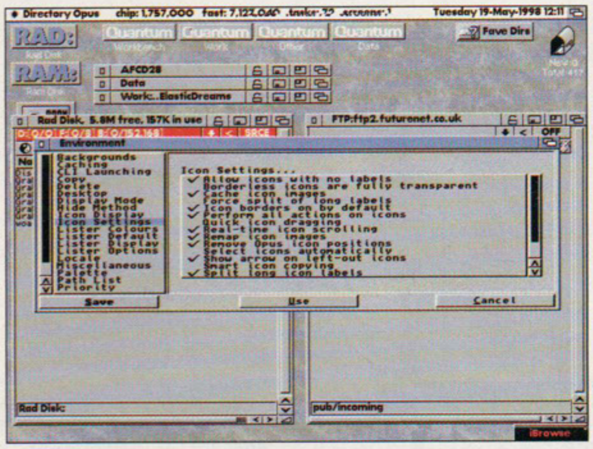


DOpus now offers a whole range of sound events that you can choose from and which are incorporated into the themes tool.

NEW STUFF GALORE!

Some of the new things in DOpus don't merit screenshots or are hard to explain with a picture. Here are just some of the highlights of the new version:

- **Zooming to the title bar. DOpus always allowed you to turn a lister into an icon, but now you can use the Zoom gadget to make it into just a title bar, just like those prefs programs you have.**
- **Enhanced operation in Icon Action mode. Just like in name mode, you can now make icon action mode use just the one lister, instead of opening new windows all the time like Workbench does.**
- **FixIcons. DOpus 5 has always had problems with icon positioning because of the fact that it uses more info than Workbench does and icons that have got corrupted which look fine under WB might look odd under DOpus. This module allows you to make sure that icons will look fine under DOpus and Workbench (and it is in use on our CD, starting from *AFCD28*).**
- **Lister Activation. You can now set DOpus not to select a file when a lister is clicked on to activate it. This should stop the accidental selection of files when moving between different listers.**
- **Popup menu improvements. Start menus can now have two layers and are also always "sticky", and buttons with multiple functions on them now act like Start menus, rather than simply changing the button. Like Start menus, button banks don't need to have any border.**



All of the icon settings are now incorporated into this one rather daunting-looking set of options.

One of the other major improvements to the new version is the updated ftp.module. If you haven't upgraded to Magellan then it will come as quite a shock, both in terms of the added speed and new functions.

Although Magellan owners won't notice such a difference in speed, they will certainly appreciate new abilities like custom listers for FTP sites, scripts for pretty much any kind of FTP event and the ability to download index files and show them in the comment field of the lister.

This last one in particular should mean that Aminet visits can almost be solely conducted using DOpus, rather than a mixture of DOpus and a program which uses ADT, like *AmFTP*, to present you with a list of new uploads to Aminet. Instead, you can simply look in the Aminet recent directory to see what's new and what it does.

The FTP address book is also much improved and you have the ability to drag entries from it onto your backdrop where they become very easy to access – simply double click on the left-out icon and up pops a lister with the FTP site.

For those of you familiar with Windows95, the concept of themes will be well-known. The point of them is to give your system a complete cosmetic makeover, from the sounds it makes when you do something to the images it uses for your windows and backdrop. All of these things are altered by default when you load a new theme.

You can stop certain settings and the like by unticking some of the options.

The reason I'm saying this is that DOpus now has its own themes. What's more, they've been designed to work in two ways. For different themes on your own machine, it hardly matters where the disparate files are, but if you want to start handing out themes (and we anticipate receiving quite a few for the CD in the coming months), you can also "build" a theme which gathers all the files you need and puts them in a directory in the Dopus main dir.

This means that if you want to distribute them, you can simply archive up this new directory and the settings file that goes with it, then upload it to Aminet or send it to us and it will work on anyone else's machine – anyone else with the latest version of Dopus, that is.

The new version of DOpus has got so much going for it that we don't really want to give the game away too much, based on a pre-release that may well change. We also want to give you the best, in-depth info when it comes out, but suffice to say that it will be a great improvement on Magellan, which was a big improvement on 5.5, which was a great imp… I think you get the idea.

If you've never used Dopus before and you've been interested enough to read through this then get the new version when it comes out. Better yet, get the current version now and upgrade – you won't regret it.

WHY SHOULD I REPLACE DOPUS 4?

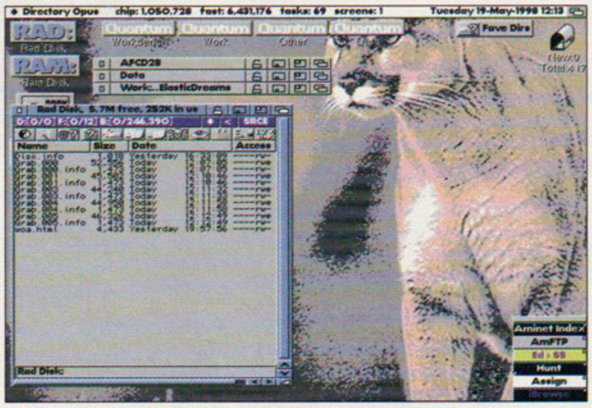
First things first. Let me say that you aren't alone. Those of you who remember when I worked on *Amiga Computing* will remember my scathing comments about the first version of DOpus 5. It seemed slower to do what I wanted and the configuration was a nightmare. I stuck to my guns and said that while it was getting better, I still wasn't convinced when 5.11 came out. However, when 5.5 appeared with its Workbench Replacement Mode, I sat up and really took notice. After all, in my daily Amiga use I was having to run DOpus pretty much every time I switched the machine on, so it made sense for me to replace Workbench completely with something that could actually multitask properly and that was so configurable.

The hardest thing to get to grips with is the fact that after all this time with DOpus 4, you feel you know it inside out, right? You don't want to have to sit through all that configuration again, do you? Well, you will and you won't with DOpus 5. You can import DOpus 4 config settings which will enable you to get it to run with no problems. Also, the way DOpus works will mean that you'll soon get tired of the default two window setup, and you'll also find that you won't need so many buttons (you have a button bank in each lister to be getting on with for a start, and the ability to add new menus to lister windows and the like), and you may want to update your filetypes, but these are all things that can be done incrementally as you explore the way DOpus works.

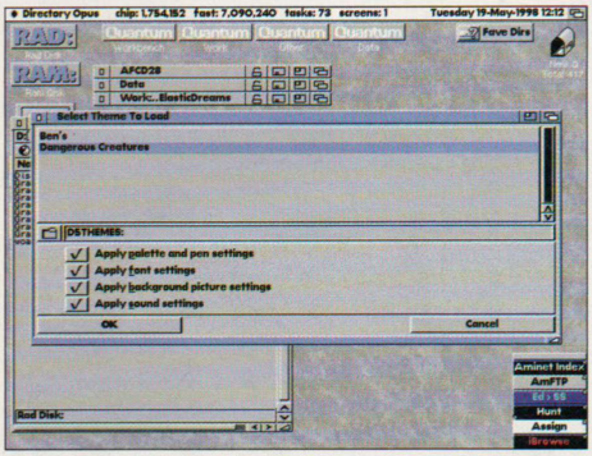
In my opinion, everyone should be running DOpus instead of their Workbench. It would make things a lot easier for us with regard to our CD and for compatibilty questions, and the CD could offer features that you've been requesting forever, such as the ability to open windows and the like.

So the answer is simple – spend the fifty quid that you'll need for DOpus. Although you might find yourself slightly confused by the number of options that are available to begin with, in a month's time not only will your Amiga look nicer but you'll be far more productive with it.

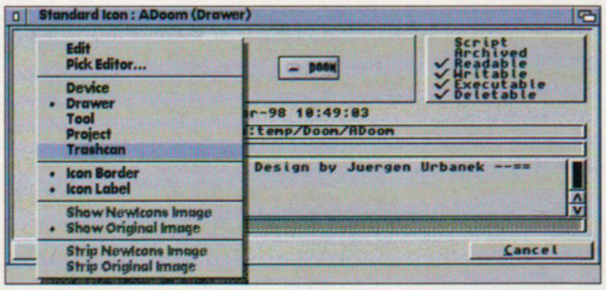
> *Although Magellan owners won't notice such a difference in speed, they will certainly appreciate new abilities…*



The Dangerous Creatures theme in action. Simply loading a theme can give your machine a whole new look without having to spend hours changing the settings.



Although I only have two themes here, there's no reason why you couldn't have ones based on anything you like. However, given Amiga users' preferences, I shouldn't be surprised if they'll all be *Star Trek*, *X-Files* or *Simpsons*-based.



The new icon information window is much more useful – out goes another commodity (*SwazInfo*)!

Epic Encyclopedia 1998

AMIGA FORMAT GOLD

Ben Vost's knowledge of the world is increased by **Epic**, but he also gets somewhat confused.

The *Epic Encyclopedia* (sic) has seen an incarnation every year, in keeping with a certain other software company. It's pretty well up-to-date with the situation in the former Yugoslavia, although there hasn't been the time to keep up with the Irish question, but then, how could there be?

This program makes a nice change to the other encyclopaedias on the Amiga and, for the most part, those on other platforms with its non-US-centric feel. Most of the voices you'll hear on the CD are English and searching for the word "color" produces no result.

Actually, there lies one of the problems yet to be ironed out with the Epic tome – that of not being able to find something. In this version, all that happens is you get to learn more about Aachen, that lovely city in Westphalia that seems destined to start the entries for all versions of this encyclopaedia. If only someone would come up with definitions for, well, something beginning with aa-something, just so I didn't have to see Aachen all the time.



Ah, the majestic eagle. You can even hear the noises it makes while it's flying along.

> ...while the Encyclopedia seems very good on dinosaurs and dogs, it's hopeless on religion of any sort...

Far better would be a message telling you that what you were looking for couldn't be found and that you should try again, perhaps using the "Deep" search facility.

However, having said that, the instructions for the CD warn that it might take up to an hour. I started a search for anything on the First World War (I put "Great War" into the search field) and had no results after half an hour of waiting. I eventually found a very terse entry by putting "world war" into the search field.

In fact, while the *Encyclopedia* seems very good on dinosaurs and dogs, it's hopeless on religion of any sort (I tried Jew, Catholic, Scientology, Mormon and Moonie to no avail).



It's a great shame that the entry on Monet doesn't have any of his paintings to show what sort of artist he was.





The *Creator* (above and below) allows you to add your own subjects to the *Encyclopedia*.

The interface for the *Encyclopedia* has been revamped again and now has a *Kai's Power Tools 3*-feel to it. The stoney GUI is very nice, but other than the buttons for playing back sound samples, etc., there's very little by way of feedback when you click on a button.

You often get a "click" sound, but it also often comes too late to be effective as a feedback device. Perhaps Epic should further emulate *KPT3* by making the buttons glow when you're over them, although I believe that *CanDo*,the tool used to create the *Epic Encyclopedia*, isn't that powerful.

After saying all that, the *Encyclopedia* is a cracking achievement, made all the more so by the fact that you can create your own entries and even upload or send them to Epic for inclusion in the next version. In fact, it's this very feature that makes the whole thing worthwhile.

If this encyclopaedia were to be made solely by the people at Epic then it would be very sparse indeed. The idea that you can add in anything that you can't find in the *Encyclopedia* is a powerful one. Just think of a topic you consider yourself to be somewhat of an expert on and start typing.

OTHER BITS

The *Encyclopedia* also comes with ancillary software. There's the *SetUp* program that allows you to alter the Amiga's speaking voice to your taste and which lets you install new subjects. You can even uninstall the program completely, although presumably Epic aren't too keen on you doing that!

The other important bit of software is the aforementioned *Creator*. This tool allows you to create your own subjects for the *Encyclopedia*, including links (keywords), pictures, sounds and animations.

Fortunately, Epic give you instructions on how to set up your samples, pictures and the like to ensure that they'll be compatible with the rest of the Encyclopedia and that they'll be small enough. When you have more than 20,000 topics, the amount of space you can devote to each one shrinks significantly. The *Creator* is easy enough to use, although the text editor could do with a word wrap to the 45 character limit that Epic impose. Fortunately, you can edit your subjects in another text editor and then import them into the *Creator*. This will probably make things easier, especially since both it and the *SetUp* program rely on the same PAL: HiRes Laced screenmode that is used for the main program.



The search facility is nearly incredibly useful, just not quite. By the way, I found tetrapod...

Anything from science fiction authors to Amiga products would be a suitable basis for poring over back issues of *SFX* or *Amiga Format*, and if you can add a sound sample of George Alec Effinger snoring or video footage of you trying to fit your Amiga into a tower case then so much the better.

Even so, there are plenty of improvements to be made. The fact that the program only shows you one entry when you search isn't very useful. It would be much better if there was a new index with all the entries that the *Encyclopedia* could find that actually match your criteria.

The only way to move between the pictures on show is to click the left and right buttons, even though there are buttons below the picture window that you could click on.

There are also some problems with the version we are reviewing if you aren't running in a PAL screenmode before you start the program.

If you use a graphics card or one of the AGA drivers for multiscan monitors like Productivity or Super72 then you won't see the whole screen as *CanDO* gets confused. Also, the indicators for pictures or sounds, etc. could actually be buttons that you press on to see or hear the clip, rather than making you use buttons with no indication as to what they are until you slide your mouse over them.

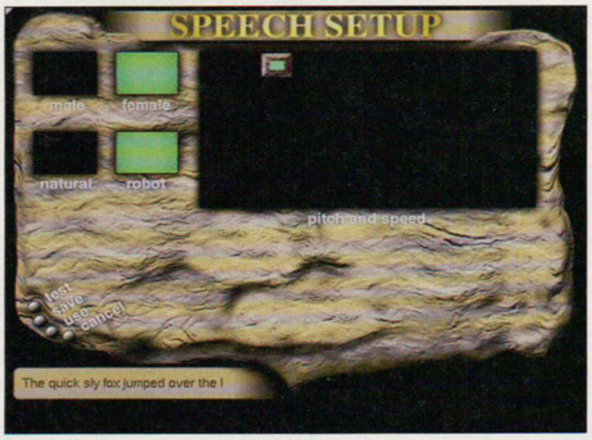
WHAT THE BUTTONS DO



The nice, stylish, new-look *Epic Encyclopedia 98* interface is very pretty but you aren't always sure of what each thing does. Here's a quick run through of what most of the buttons actually do:

1. Cycles between the pictures.
2. The picture window. If you click in it, the pictures will be displayed full-screen.
3. Adds to hotlist button.
4. Buttons to scroll through the subject list.
5. The subject list itself.
6. A guide to how many pictures a subject has. There's a maximum of eight.
7. A guide to what types of info are available.
8. The small anim playback window. If you click in it, the animations will be played back full-screen.
9. Media playback buttons. You can see what they are when you have your mouse over them.
10. The infotext window which gives you the text entry for the current subject.
11. The zoom button gives you a teleprompter-type view of the infotext.
12. Miscellaneous gadgets: The subject you're looking at, an alphabetical selector, a screen blanker and the search facility are all shown or selected here.

> *... a cracking achievement, made all the more so by the fact that you can create your own entries...*



You can alter the Amiga's poor quality speech to its most palatable setting for when you want to hear about the subjects, rather than read about them.

Perhaps I'm being petty, as I know that Epic have a patch almost ready for the software that will cure some of the problems involved in running the *Encyclopedia* on modern systems.

Talking of problems, one other reared its ugly while playing with the program. Beware of using the *Encyclopedia* on a machine equipped with an older CD-ROM drive unless you are using *AmiCDFS* to power it.

Epic say that they haven't had any trouble from anyone using that file system, but I found that even the commercial *AsimCDFS* gave me problems when using this disc.

The main reason for this is that, like the *Amiga Format* CDs, there are so many files on the disc it can cause problems for some drives.

But these minor problems don't override the fact that the *Epic Encyclopedia* is a brave attempt on a market that is dominated by MicroSoft and it shows that the Amiga is the computer that invented the term multimedia, before it was appropriated by other computers.

Likewise, the ability to add new subjects to the program is an incredibly good idea and, notwithstanding the fact that some third party entries might not be as authoritative as those gleaned from the *Encyclopaedia Britannica*, it's very useful if you consider yourself to be expert on a topic that is inadequately covered by the software.

The *Epic Encyclopedia* gets better all the time. This version isn't flawless but it's a step further in the right direction. At only twenty quid, it really should be in everyone's collection.



The main part of the *Setup* program. Here is where you'll add all those new subjects that you've written to the *Encyclopedia*.

DISTRIBUTOR: Epic Marketing (0500) 131486
PRICE: £19.99
REQUIREMENTS: AGA machine or better, CD-ROM drive, 4MB RAM+.

SPEED: ●●●○○
No slouch, but *CanDO* slows it down.

MANUAL: N/A
Some explanation in the CD case but even this is pretty unnecessary.

ACCESSIBILITY: ●●●●●
Absolutely superb.

FEATURES: ●●●●○
Very nice, but still needs more work for perfection.

VALUE: ●●●●●
Everyone should have this.

OVERALL VERDICT:
Good-looking, expandable, easy to use – what more could you want?

90%

AF Competition!









WIN!

10 copies of The Epic Interactive Encyclopedia 1998 Edition

To win one of ten copies of this *Format* Gold-rated program, we decided to make the competition slightly more educational than usual. You might have to dig around in a paper encyclopaedia to find out the answers to these ones, but that should make you appreciate the Epic version even more!

1. *Is the Coelacanth animal, vegetable or mineral?*
2. *What year did Albert Einstein die?*
3. *What country is Lima the capital of?*

COMPETITION RULES

1. Employees of Future Publishing and Epic Marketing are ineligible for entry to this competition.
2. No correspondence will be entered into.
3. Winners will be selected at random from all correct entries received by the closing date.
4. No cash alternatives will be offered.
5. Closing date for this competition is Friday 31st July, 1998.

When you know the answers to these questions, send them on a postcard to the usual address:

Amiga Format
Epic Competition
29 Monmouth Street
Bath
BA1 2BW
England



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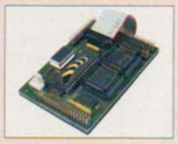
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33MHz plcc FPU inc. Crystal £15.00
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Buddha IDE Controller for A1500/2000/4000 .... £49.00
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Oktagon 2008/4008 SCSI Controller £89.00
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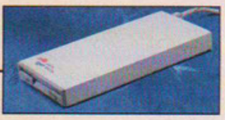
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"A brilliant piece of equipment" 9/3/98 Nicholas Lamburn
"Want a VGA or Multiscan monitor, but want to watch tv on it too? Ben Vost gets best of both worlds with this rather oddly named box" AF Jan 1998



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All 2.5" Hard drives come formatted and installed with Workbench, including IDE, cable, screws, software and instructions. *(please check for availability)*

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1.0Gig .... £139.00 Starbuy

Star Buy

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3.2Gig .... £139.00 *5.0Gig £219.99

We will partition and format Hard drives and install Workbench. *5.0Gig will fit and work on Amiga Computers contrary to warnings given
(Amiga Format Gold Award winner August 1997)
(Amiga Format Gold Award for 3.8Gig January 1998)

Memory

4Mb Simms .... £10.00 8Mb Simms £20.00
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DD floppy disks (50) with disk boxes *including multicoloured disk labels* £13.00
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Pagestream 3.3

AMIGA GOLD FORMAT

Desktop publisher Tony Harris runs a keen eye over the Amiga's premier DTP program to see just how great it is.

As a publisher, I am forced by circumstances to work on various platforms, using programs such as *QuarkXPress*, *PageMaker* and others. I also choose to use Soft-Logik's *PageStream 3* on the Amiga. The reason I use a number of publishing programs is simple – there are very few applications on the Amiga that can be realistically compared with similar ones on the PC or Macintosh and actually do okay. *PageStream 3* is one of those programs.

The latest version installed and ready to go on my Amiga is *PageStream 3.3a*, and this package is more than just a desktop publishing program.

As well as the page layout program, it comes with a word processor called *Pageliner* and *BME*, a bitmap editor program. Add these to the functions in *PageStream 3* that let you import graphics, process them and then export the image to disk and you can see that this is no ordinary piece of software.

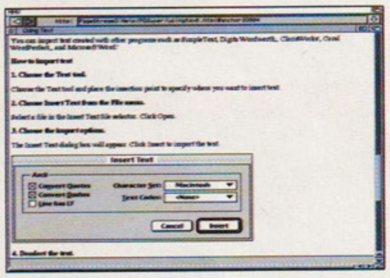
In fact, if publishing is your thing, I'd say that this program is just one reason to hang on to your Amiga.



Import a picture, click on the FX button and you have an image processing program as well. Changed images can be exported too.



Here we see two key features. Fly out tools are new in version 3.3, while masking allows you to have your text filled with a bitmap like this, seen on the page.



The online help for *PageStream 3* now contains text and pictures. There is also a printed version of the manual supplied.



For those that dare to be different, *PageStream 3* lets you place text into a shape like this very easily.

NEW FEATURES IN 3.3A

Here are just a few of the new features in 3.3a.

FLY OUT TOOLS: Pop-up toolbars to give you more tools without cluttering the screen.

DEFINE FONT SUBSTITUTION: When you load an old document and it uses a font you don't have, *PageStream 3* will let you know what fonts from the document are not installed and give you a chance to replace those fonts with others.

HTML HELP: User-friendly online help with text and pictures. Screen grabs are from the Mac, which isn't a great drawback because the requestors have the same/similar functionality.

RTF TEXT EXPORT: Exchange files with *WordPerfect PC* or *Microsoft Word* with most of the formatting intact.

PLACE GRAPHICS: *PageStream 3* now allows direct placing and scaling of the graphics before it is placed on the page.

AUTO PAGE ORIENTATION: Mix landscape and portrait pages in a single document and print at once.

DRAG DUPLICATE: Duplicates an object by using the Alt key and the mouse.

Mirror, Negative, Thumbnail, Crop & Reg marks and colour separations to non-PostScript printers.

EXTRA EXTRA: Like big-time DTP products such as *QuarkXPress* and *PageMaker*, *PageStream 3* also has a number of extras to enhance the main program. Unlike extras for quirky *Quark* though, extras for *PageStream 3* are very affordable. Ones to look out for are *TextFX2* and *Borders*, while others like the *JPEG filter* are just plain essential. A new one called *Tables* is due any time now.

PageStream 3 extras are available from LH Publishing (01908 370 230).

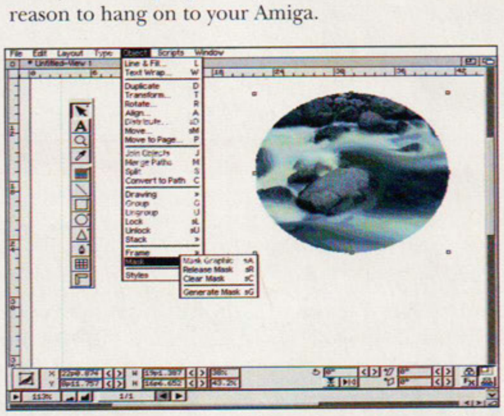
THE PAGESTREAM 3 INTERFACE

The screen in *PageStream 3* can be as simple or as cluttered as you like. As well as being able to display a toolbox with the fancy new pop-up tools, you can also display many other windows like the very useful Edit Palette and Toolbar.

Other palettes that can be made to sit open on your screen include the Style palette so a style sheet can be chosen at the click of a mouse button or a script palette for running ARexx scripts.

This can be used to do things like create text on a curve, place text in shapes and other functions you can create yourself using *PageStream 3*'s macro recording facility.

Another window which I have open all the time is the Colour palette which has colour libraries for RGB, CMYK, Pantone and others. For many, all these palette options will just clutter the screen, but they can be opened and closed easily enough and if you have a graphics card with a big screen, the clutter issue isn't likely to effect you.

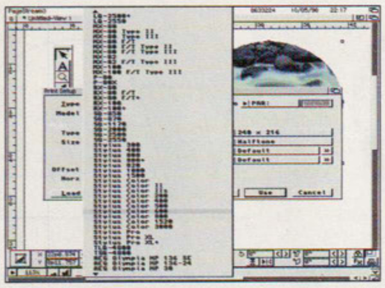


Masking allows you to have bitmaps in any shape which is extremely important when you need to have complete freedom on what you do with elements on the page.

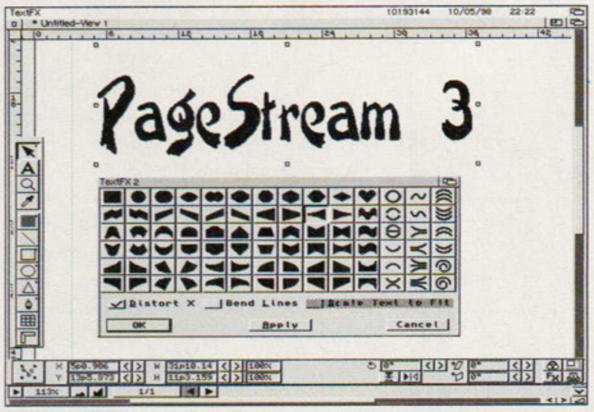
MAKING PAGES

When you start *PageStream 3* it displays a Navigator. From here you can create a new document or open an existing one.

PageStream 3 lets you open multiple documents and, interestingly, multiple windows of the same document. This latter function lets you view a page in one window at one magnification and another magnification in the other window. New pages can be inserted into a document



As you can see, there's no shortage of printer drivers, especially if you have one of the new Epson Stylus models. I still recommend *TurboPrint 6* for the ultimate quality in colour, though.



Another major feature is *TextFX 2*, an optional extra that lets you bend and distort text within *PageStream 3*.

either before or after a set page and can be based on a master page, of which you can have multiples.

There are many other options such as chapter naming, numerous page numbering options and much more.

You can even display a page palette which lets you go to a specific page by double clicking on the page icon representing the page you want.

Along with a page, there are various guides which can be useful for assembling objects on a page, like rulers, grids and user definable guides.

These latter items are not as user-friendly as those in a program like *QuarkXPress* but they're still very useful.

ADDING TEXT

Text is one of the key elements on a page and *PageStream 3* is very flexible here. Unlike *QuarkXPress*, the standard upon which all other DTP products are judged, *PageStream* gives you a number of options when you want to add text to your page. In *QuarkXPress* and the Amiga's *ProPage*, for example, you have to create a frame for your text.

In *PageStream 3* you can do it that way as well, but you also get the option of using the text tool to type any text directly onto the page. If you prefer, you can create the text in the word processor of your choice and place it on the page in text boxes or type the text directly into the text box.



PageStream 3 is not only the best there is on the Amiga but also rates highly when compared to the more expensive DTP packages on the PC and Macintosh.

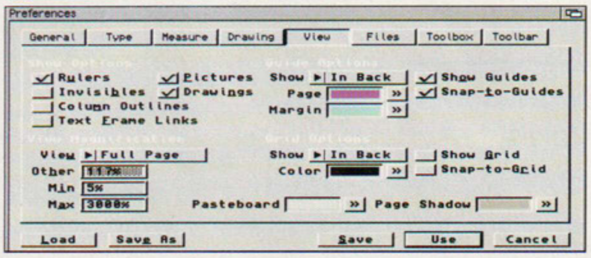
I shouldn't forget the *Pageliner* editor either, a freebie that comes with *PageStream 3*. For the creative minded folk, text can be placed in objects which have been converted to text frames. This lets you place text in shapes.

Once text is on your page you can choose from a number of font types to format it. By default, *PageStream 3* supports Compugraphic and PostScript Type 1, as well as its own DMF format. Add an optional engine for True Types and you can use these types of fonts too.

These are the basics but *PageStream 3* is capable of a lot more. Much has been made in the press about *QuarkXPress*'s ability to mask objects to create effects like a picture in text, but *PageStream 3* has been able to do this for a while and very useful it is too.

Also very helpful is the function which lets you change the aspect ratio of text so it can be made wider or thinner. You will also find that *PageStream 3* has a number of interesting styles such as shadow, reverse and others, on top of the normal bold, italics and so on.

With the aid of an optional filter, *PageStream 3* can import *Wordworth* documents, including pictures providing they are in IFF-ILBM format. There is much more to *PageStream 3*'s text handling but the only way to find out the whole story is to give it a try.



PageStream 3 gives you lots of control over how everything works as you can configure the functions to a great degree.

WORKING WITH PICTURES

It goes without saying that pictures are very important to publishing and *PageStream* is more than able to handle most people's needs. In fact, it goes beyond a DTP program in many areas as it allows you to not only import an image but also process it and then export it in various graphic formats.

One publishing problem is that pictures slow down screen refresh and gobble up oodles of memory. In *PageStream 3* you can choose to use a positional. This is a low resolution equivalent of your image and this speeds up screen refresh and helps to conserve memory.

Free with *PageStream 3* is a program called *BME*, which stands for *BitMap Editor*. This is a very useful mini paint program complete with some image processing tools, another example of how *PageStream 3* leaves the opposition for dead in all-round power tools.

When you consider I'm comparing it to more expensive programs on other mainstream platforms, you can see just how great it really is.

PRINTING

Putting text and pictures on the page is no good if you can't print them and here is another example of just how versatile *PageStream 3* is. I haven't tested its high-end features for this review because that would mean Imagesetter output which costs big bucks, but I have used *PageStream 3* with PostScript lasers and colour inkjets and it proved to be very good in all cases.

The only downside is that I would still recommend a package like *TurboPrint 6* for colour work as *PageStream 3*'s drivers still don't seem as good as those from IrseeSoft's package.

What does work well in the printing toolbox is *PageStream 3*'s ability to print to disk a page as a 24-bit IFF-ILBM bitmap. This has proved very useful a number of times and this is the only package that seems capable of it.

Overall, although I'm not saying the package is perfect because none that I use are, including the killer apps like *Quark*, I have found *PageStream 3* to be nearly as good as programs like *QuarkXPress* and *PageMaker*.

In some areas, *PageStream* actually betters these programs. To be honest, the only downside is that the Amiga doesn't have the speed of the platforms which run the opposition programs. That said, on the '060 *PageStream 3* is no slouch, and even a 68030 or 68040 should be good enough.

It's easy to say *PageStream* is the best on the Amiga because it's the only publishing program that is still being developed on our favourite platform.

However, *PageStream* is right up there with the best on any platform, and because of that every Amiga owner should support it just to say thanks to Soft-Logik for sticking with their machine. After all, they are one of the very few that still develop Amiga products. 'Nuff said.

DISTRIBUTOR: LH Publishing (01908 370 230). **PRICE:** £125
REQUIREMENTS: HD, 4Mb RAM. Fast processor recommended.

SPEED: ●●●●○
OK, better with a graphics card.

MANUAL: ●●●●○
Printed manual and online help file.

ACCESSIBILITY: ●●●●○
Industry standard tools make it easy.

FEATURES: ●●●●●
Packed with everything you could want, with more in development.

VALUE: ●●●●○
A bargain compared to competitors, but more than most Amiga packages.

OVERALL VERDICT:
Does the business and deserves the support of every Amiga owner.

95%

MasterISO v2

All the CDR software you'll ever need, with Nick Veitch, write here write now.

AMIGA GOLD FORMAT

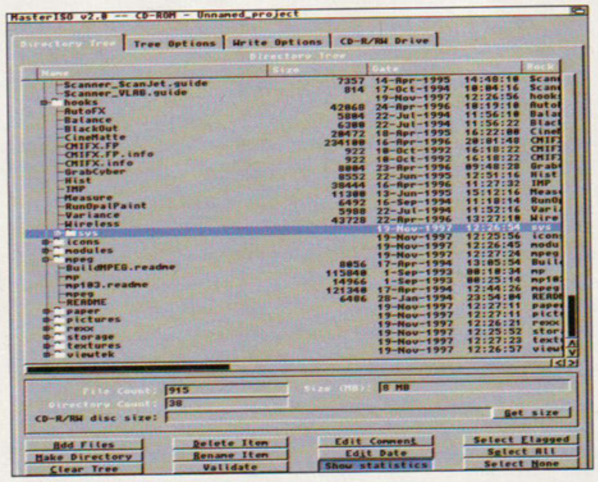
For rather a long time now, the Amiga has had the software to support CD-ROM writers. In fact the original tools were developed over six years ago, so developers could create products for the CD³². CD-writers have come a long way since then and so has the software used to drive them, but perhaps not far enough.

MasterISO v2 represents what I believe is third generation CD-building software. While Commodore's original tools were strictly for techno-aware developers (like the earlier versions of *MakeCD*), the previous version of *MasterISO* could be considered to be second generation as it didn't require an intimate knowledge of ISO standards and index variations to get it to work.

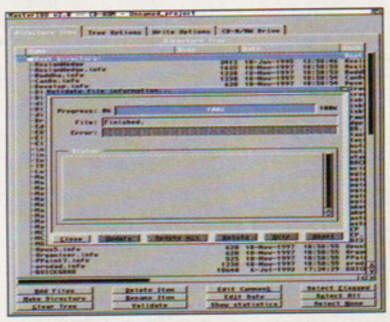
However, the cost of this simplicity was a lack of real power. It would burn a CD for you, but that was about it. You couldn't do anything clever – there was no multisession support, very little audio control, no Rock Ridge capability… you get the idea. And now, after a few more years, Asimware have come up with a third generation product.

> Asimware… not only include a lot of great features, but also make the software as easy to use as possible.

This brings Amiga CD-burning up to the levels experienced by other platforms. Features like the ability to rename individual files in the directory tree (meaning the file on the resulting CD is renamed, not the original), having different names for the same file under ISO9660, Rock Ridge or Joliet, being able to make directories and add files from several sources.



The directory tree is extremely powerful but could be easier to use.



Checking the validity of your file list is a very good idea.

Essentially, all these features mean that the files can appear anywhere you want, called anything you want, without having to modify or rearrange the originals (which is very important if you are including files read off another CD, which obviously can't be modified). All the filenames can then be subsequently checked to ensure they conform to the relevant restrictions (ISO9660 requires filenames to be eight characters with a three letter suffix, all upper case, and directories no more than eight levels deep). This is very handy, as under the old system the first you would've found out about it would've been when the CD you cut started acting strangely.

There are some issues surrounding the general ease of use of the file listers in the directory tree GUI, but not major ones. Basically, there are better ways of implementing multiple selection, but this is hardly likely to have any impact on most users of the software.

FIRST CUT IS THE DEEPEST

What does have an impact is the reliability of the cutting process. I can honestly say that I have never had a buffer underrun error with *MasterISO2*. I have had a few CDs which inexplicably wouldn't work, but haven't actually generated any coasters in the burning process. This is quite significant. In the older version of *MasterISO*, and indeed, right up to version 2.5 of *MakeCD*, I had so many underruns I probably could've tiled our office floor with them.

MasterISO2 has an automatic buffer setting which attempts to choose the best settings for your machine. So many things can alter the performance of a CD writer that you do have to experiment a bit if you want to set up the buffer manually.

Processor speed, the amount of memory available, the speed of that memory, what mode you are cutting the discs in – taking all this off your hands and automating it is a sensible way to go.

MasterISO2 also includes a system test feature which will tell you how fast you can expect to cut CDs and what modes you can use (Disc At Once is very processor and drive intensive).This really illustrates the lengths to which Asimware have gone to not only include a lot of great features, but also make the software as easy to use as possible.

The other excellent CD software for the Amiga, *MakeCD*, has gone through many more revisions over the years, and also includes many of the features which have now been added to this version of *MasterISO*. However, it's more

DISK AT ONCE / TRACK AT ONCE

These two terms relate to the way in which the CD is recorded. Track At Once is usually considered the "standard" method of generating computer CDs.

With this option, each track of the CD (e.g. audio or CD-ROM data) is written in one go, but the writing process may be paused or suspended between tracks. You can write one track one day, turn off your machine, have a nice sleep (mmmm, sleeeep) and continue working the next day. When all the tracks have been written, the disc can then be fixed. This generates the Table of Contents (TOC) and lead in and out information for the disc. When finalised, it can be read in a normal CD-ROM drive.

In Disc At Once mode, the main difference to the user is that the whole disc is completed in one go and there is no chance of stopping during the process (unless you abort and write off your CDR disc of course). The other difference is that while in TAO mode all the index information is generated by the CDR drive, but in DAO mode it has to generate and write all this information, including the error correction. This is very processor intensive ('060 recommended) but does give you greater control over the specifics of the CD. If you want to produce a gold disc which can be used as a commercial master, DAO writing is advised.

complicated settings and various windows make it far more complicated for the novice to use.

Asimware have included a novel startup screen which asks you what type of project you wish to start: A CD-ROM copy of a hard disc, an audio CD, a duplicate of an existing CDR or CDRW, erasing a CDRW or an advanced project. From then on, only the things which you need to set or specify are shown in the interface.

Obviously, it could be suggested that some things which you can only set in the advanced options should really be available in some of the other modes too, but you have to draw the line somewhere. I'd suggest that if you already know what these options are then you should be using the advanced mode anyway.

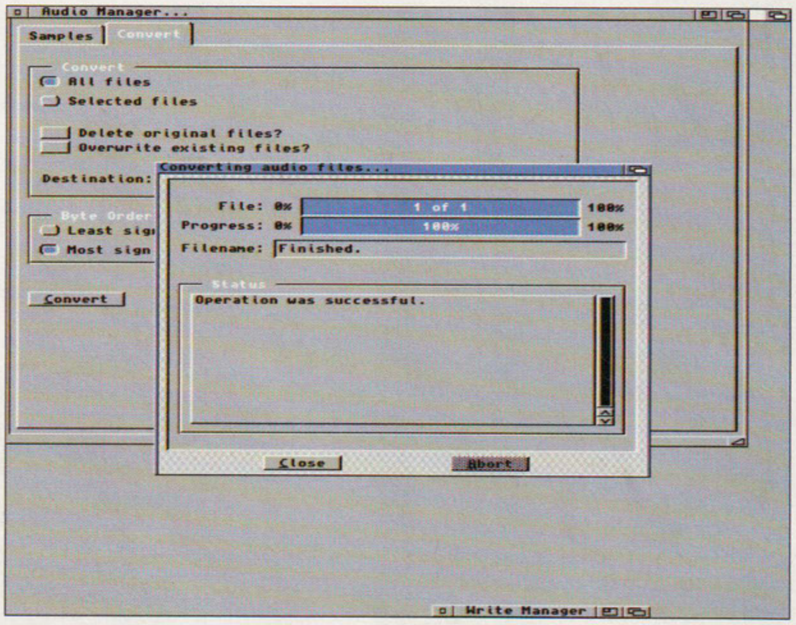
SOUNDS INTERESTING

For the audio enthusiast, *MasterISO* now includes some specific audio tools, included in a separate section of the software. Although the features are fairly basic, it makes it easy to handle samples which aren't in the CDDA format so they can be selected and converted ready for use.

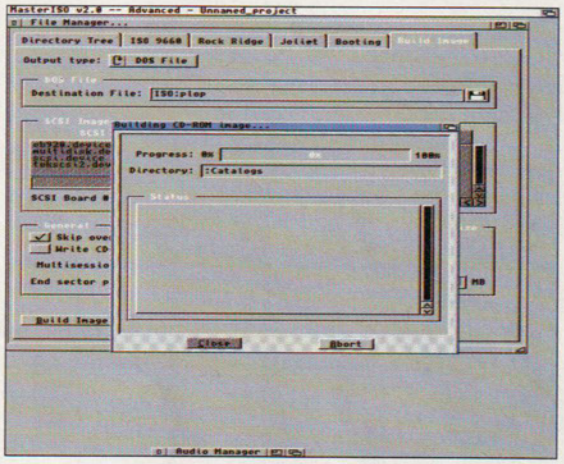
This can be done on the fly but if you're already pushing the limits of your processor by using DAO mode, it is wise to convert the files first.

SUPPORTED DRIVES:

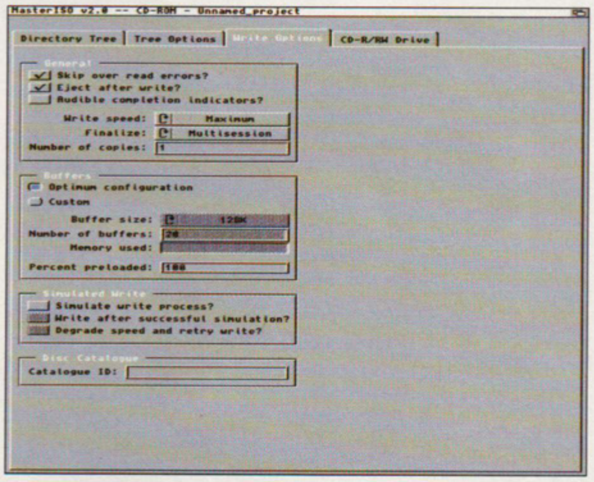
- HP4020
- HP6020
- HP7100
- JVC2010
- Mitsumi CR2600e
- Philips CDD2000
- Philips CDD2600
- Philips CDD3610
- Philips Omniwriter
- Pinnacle RCD1000
- Pinnacle RCD5020
- Pinnacle RCD5040
- Pioneer DW-S114X
- Plextor PX-R24CS
- Plextor PX-R412C
- Ricoh 1420
- Ricoh 6200s
- Ricoh 6201s
- Sony CDU920s
- Sony CDU924s
- Sony CDU926s
- Sony CDU928e
- Teac CD-R50S
- Teac CD-R55S
- Yamaha CDR100
- Yamaha CDR102
- Yamaha CDR200t
- Yamaha CDR400t
- Yamaha CDR400c
- Yamaha CDR401t
- Yamaha CDR4001
- Yamaha CDR4260



Yet another successful mission. Even DAO work is extremely reliable.



MasterISO v2 is fast, but you have to get used to the fact that creating images of 28,000 files is going to take a while.



Various write options are available, including DAO writing.

MasterISO supports software in the usual file formats, plus a few like Maud, AIFF, 8SVX, WAVE, CDDA, Studio 16, Samplitude HDP.

Unlike *MakeCD,* you can't actually play the samples or CDDA tracks. This isn't really essential but it would have been a nice feature in this otherwise completist software.

The manual, you'll be pleased to hear, goes above and beyond the call of duty, with a huge amount of information to be found in its 230 pages. Not only does it simply explain every button, gadget and menu item, it even has some very useful information on SCSI and IDE devices, CD-ROM types and sector formats.

Basically, you are not only buying the instructions for how to run the software, but on how to create just about any type of CD-ROM.

SUPPLIER (UK): Blittersoft (01908 261466).
PRICE: £69.95.
REQUIREMENTS: CD-R drive, WB 2+, 4Mb, hard drive.
Tested on: A2000/'060, WB3, HP4020.

SPEED: ●●●●○
Good ISO creation and writing on the fly results, even in DAO mode!

MANUAL: ●●●●●
An excellent reference work.

ACCESSIBILITY: ●●●●○
It is difficult to see how CD creation could be much easier.

FEATURES: ●●●●○
It's not missing much.

VALUE: ●●●●●
Top value for professional software.

OVERALL VERDICT:
Currently the best all-round CDR-writing software for the Amiga.

96%

COMMODORE'S FILESYSTEM

When Commodore pioneered CD-ROM equipped computers (which they did with the CDTV and the CD32), they also invented a file system so the Amiga's operating system could understand how the files were stored on the CD.

This was all very well, but two things happened. Firstly, all the other computer platforms started using CD-ROMS too. When the market was sufficiently large, many people adopted new standards and extensions to the original ISO standard for CD-ROM drives (ISO9660).

The second thing was that Commodore never did anything more with their filesystem in the way of updating it. In fact, they did the worst thing possible and included it in WB3.1.

This was very bad because it meant everyone used it (whereas if they had been left to their own devices they might have bought or registered one which offered more features and was more reliable). The result of this has been many hours of misery for both users and developers.

If you have Commodore's filesystem (it will be on Workbench as devs:cdfilesystem) then by all means keep it for testing purposes, BUT DO NOT USE IT TO MOUNT YOUR CD DRIVE WITH.

It's slow, quirky and won't support many features others take for granted. As an alternative, either purchase the best filesystem, *AsimCDFS* (also made by Asimware) or use one of the high quality alternatives such as *AmiCDFS* which can be found on our CD every month. You'll be doing yourself and the rest of the world a favour.

MicroniK A1500

Ben Vost looks at your only realistic alternative to buying a new A4000T.



The MicroniK tower has the nicest case of all the tower conversions because it is custom-made.

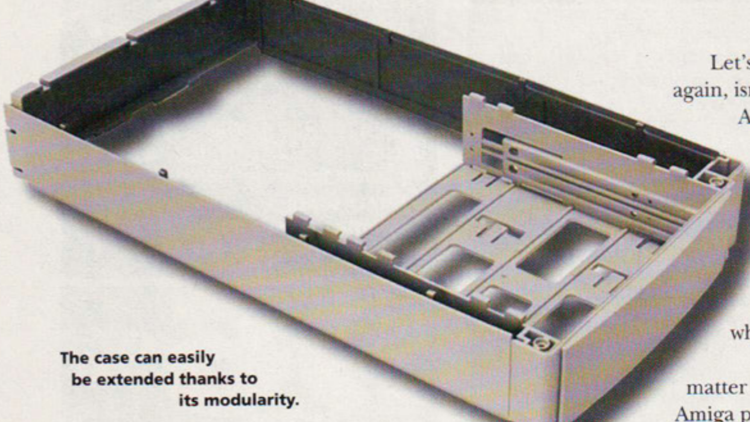
At the moment, if you want to buy a brand new Amiga with Zorro III slots you don't have much of a choice. You can either go for an A4000T at a cost of many thousands of dollars, or you can go for the Infinitiv A1500 from MicroniK via Blittersoft.

Although you are buying a brand new Amiga, what you're actually getting is an A1200 in one of MicroniK's now much nicer cases (they used to be ever-so plasticky) along with a Zorro III busboard for you to plug in all those Zorro III-only cards you have lying around the place like, umm, the FastLane or, errr, the V-Lab Motion.

If truth be told, there aren't all that many Zorro III-only peripherals you can buy for the Amiga (and none available in this country as new). Yes, you can get Zorro III graphics cards like the Picasso IV or the CyberVision 64/3D, but these are equally at home in a Zorro II system as they autoswitch.

> The Infinitiv 1500 has a very nicely designed plastic case which is backed up with a steel construction inside...

So why get this system? Well, the Zorro III bus is faster than the Zorro II, but not as fast as a "real" Zorro III bus as found on the A3000 or A4000. Also, an Infinitiv A1500 doesn't just get you Zorro III slots. You get an A4000-style processor slot (you'll need an A4000-style processor card or accelerator for Zorro III), a SCSI controller, three PCI slots and an optional video slot too.



The case can easily be extended thanks to its modularity.

Let's go in reverse. The video slot, again, isn't a much-used port on any Amiga, although it can be very useful. The only peripherals that really use it at the moment are the Picasso IV graphics card and the Video Toaster, although you can get an internal ScanDoubler for the CyberVision64/3D which uses it.

The PCI slots are a different matter altogether. Absolutely no Amiga peripheral uses them right now, but that doesn't mean they are wholly useless. For a start, if you were to buy a "Pentitrator", which is essentially a Pentium PC on a card, you would find that it needs a PCI slot to sit in.

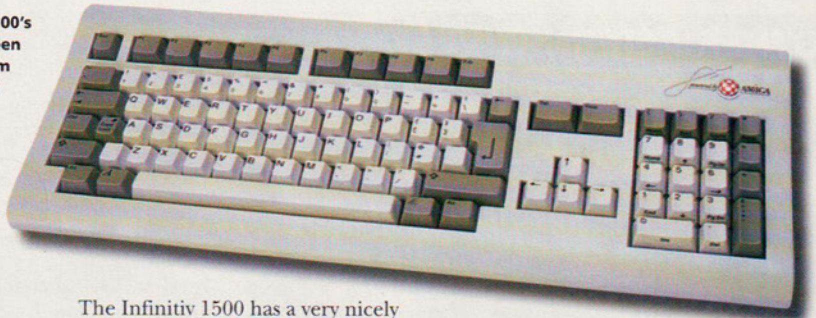
Likewise, MicroniK have been promising to have support for PCI-based graphics cards and the like. They demonstrated one such card in their machine at the Cologne show, but we haven't heard much about the idea since then. Also, as the PCI slots on this board aren't "active" (they need a bridgeboard to make them work), you

would still need a new board to make them go. You also get a SCSI II controller on board. This seems pretty reasonable, but in tests we got no better than average results.

You also get a built-in battery-backed clock on the busboard and with good reason. You see, if you want Zorro III rather than Zorro II from this rather expensive bit of kit, you need to be using an A4000-style accelerator card instead of your old Blizzard 1230 IV.

What's the difference between the two, other than having more power and space for more SIMMs? Noooo, not the name. That's right. There's no need for a clock on an A4000 accelerator because the A4000 already has one, unlike the A1200.

In old designs of this busboard it meant that you couldn't have a clock for your A1200 – an important omission, especially in these days of Internet usage where if you didn't have one you'd be in the embarrassing situation of having all your emails dated from January 1978. This machine gets around that problem completely.



Even the A1200's keyboard has been put in a custom housing so you can avoid those nasty keyboards with a Windows logo on them.

The Infinitiv 1500 has a very nicely designed plastic case which is backed up with a steel construction inside to get around all those complaints of flimsiness that were attached to the MicroniK cases before. It is sturdier now but it's not immune to the wobbles, especially twists from front to back. The case also uses a clip-together philosophy which is fine if you're the sort of person who never touches the insides of your machine, but people who are always opening and closing their Amigas may find that plastic fatigue soon gets to the clips used to secure the Infinitiv together.

> "All I can say is that it worked beautifully, although at the end of the day it wasn't as fast as my machine at home..."

However, on the plus side, the mainly plastic construction is very light and also easily expandable. If you decide that you are going to need an extra 5.25" bay, you can simply click one or more on top of your existing tower with no problems. Well, I say easily but

Continued overleaf ➡

The A1500 Explained

1. A whisper-quiet fan. It became hard to know whether or not the machine was actually switched on!

2. 5.25" bays. By default, the MicroniK tower comes with two, but you can add more if you want to.

3. 3.5" bays. These ones face towards the rear of the machine and aren't designed to be open to the outside world, unlike...

4. 3.5" bays. These ones hold your floppies and have a built-in front plate.

5. CyberStorm. This is the only bit of the A4000 processor slot that's visible, but you can add a CyberStormPPC or even a standard Commodore card if you like.

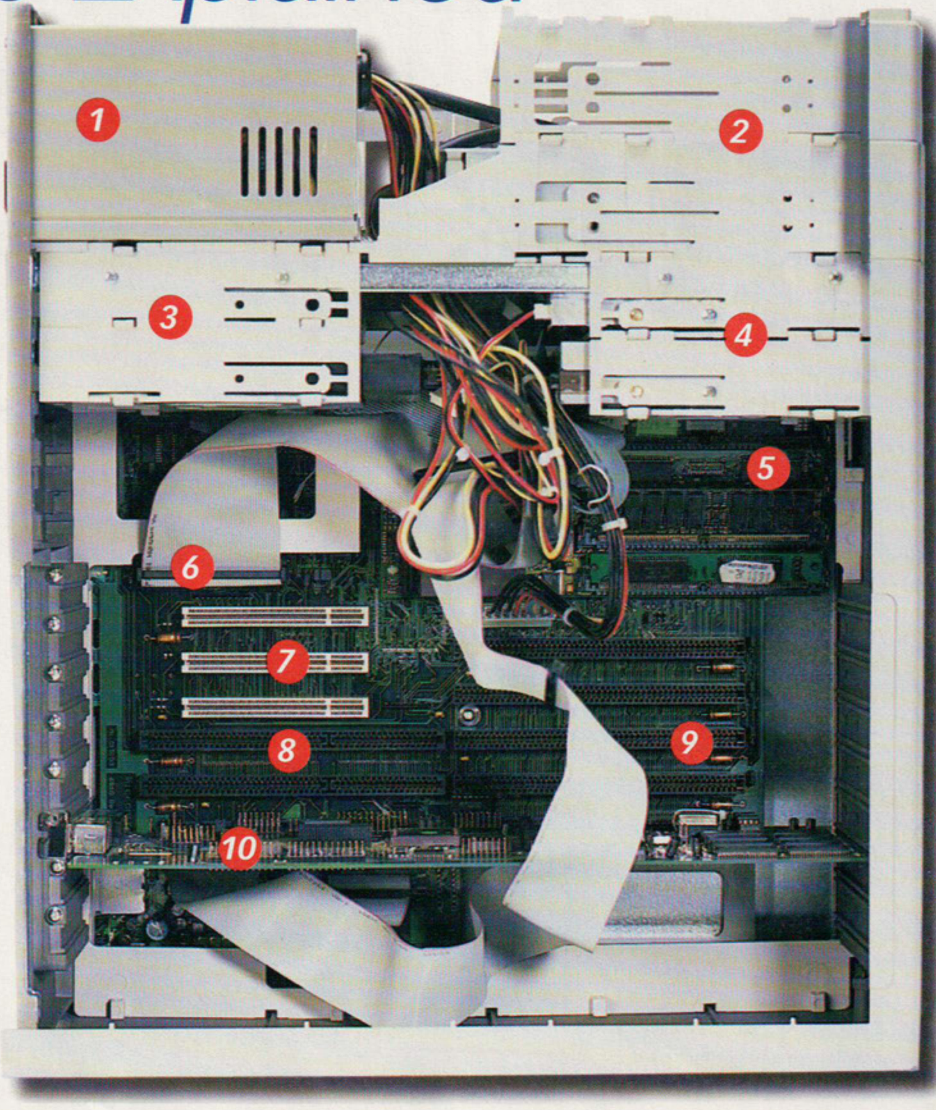
6. SCSI controller. The MicroniK's built-in SCSI 2 controller is a nice addition.

7. PCI slots. These slots aren't active so you'll need some sort of bridgeboard to activate them.

8. ISA slots. Again, these PC-type slots aren't active so you'll need some kind of bridgecard to make them work.

9. Zorro III slots. These are only Zorro III compatible if you have an A4000-type accelerator card.

10. Optional video slot. You can't see it as it's being used by that lovely Picasso IV right now, but there's a fully working video slot under here somewhere.



OTHER ALTERNATIVES?

If you scan our Reader Ads regularly, you'll have noticed that not only are there A1200s for sale second-hand, but there are also other machines, with Zorro slots. For example, in this month's pages you'll find two A2000s for sale, both at a very low, knock-down price, that will give you Zorro capability and, admittedly, only ECS graphics. However, with the money you save on the machine you can buy a graphics card like the Picasso IV and bypass the AGA256/HAM8 chipset and go straight for 24-bit colour in high resolution.

Last month's *AF* had two A4000s up for sale, and although the case for the A2000 or the A4000 isn't as stylish as that of the MicroniK machine, and there isn't as much room inside for expandability, these machines are actually cheaper than getting the new MicroniK tower.

⬅ it's a bit of a hassle really, although it's a lot easier than welding a new bay onto one of the metal towers.

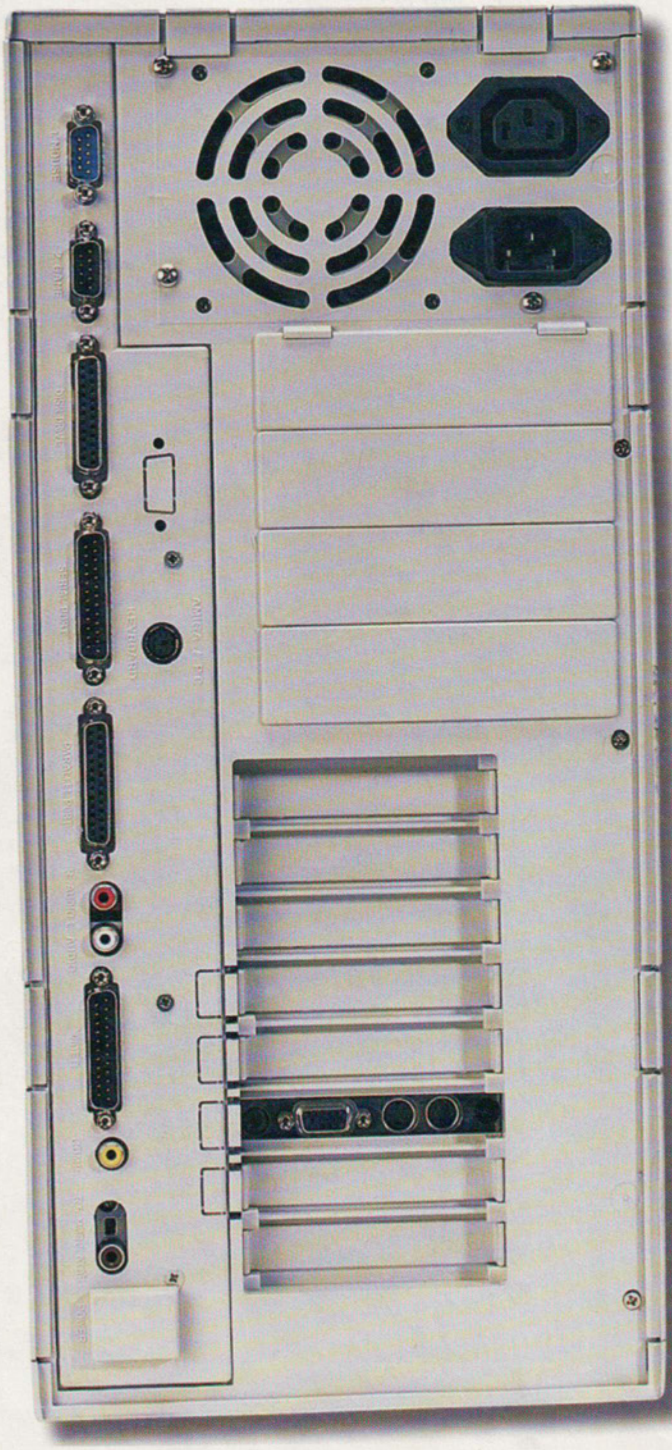
Even so, the clip holes on the new back plate add-on are about half a millimetre too low for the clips on the tower I got, probably due to the vagaries of high temperature vacuum forming, and it also means that you have to remove the new additional side panel when you want to get inside.

I would have thought it would make more sense to add these new side panels at the bottom of the tower. That way, you wouldn't necessarily need to remove them every time you took the side off. Still, maybe in the next revision of the tower?

As a machine, the Infinitiv works well. The model we received came with a CyberStorm II with 20Mb RAM and a Picasso IV to show us how well the Zorro III board worked.

All I can say is that it worked beautifully, although at the end of the day it wasn't as fast as my machine at home (which has a similar setup, but is based on an A3000T and has lots more RAM).

There are several reasons for this. The first is that the Picasso IV takes up a fair amount of fast RAM when in use and this machine only has mix and match SIMMs. The second is that the Zorro III busboard in the MicroniK tower isn't as fast as one in a machine designed for it. I very much doubt that Commodore's engineers ever envisaged a day when the A1200 would be the only machine readily available to the end user who would be forced to upgrade and upgrade and upgrade them in order to take advantage of all the goodies that a Zorro-based Amiga has to offer.



As you can see, your new MicroniK Amiga will have a full complement of ports.

More in-depth analysis can be done by you at home since the MicroniK Infinitiv behaves exactly like your A1200, even down to the pause between hitting the keyboard with the Vulcan death grip and when it actually resets.

The MicroniK gives you the dubious pleasure of being able to do it through a button on the front of the case instead of having to hit the three keys, but other than that there are few differences to point out as all you can see is the screen.

The keyboard is a bit of a giveaway because MicroniK have made their own case and housed the A1200's keyboard within, and very stylish it looks too, with the boing "Powered by Amiga" logo on the top right corner. The only really obvious differences are that if you have a MicroniK A1500 you can have a lot more memory than you can have with a normal A1200 accelerator.

You can also have a graphics card, so the higher resolutions would be a dead giveaway too.

I guess what I'm really trying to say here is that this isn't a review of a completely new product. Sure, the case is nice, sure, it's nice to have Zorro slots, but the essence of this machine is still a 1992-vintage A1200, with all the good and bad points of that Amiga.

At the end of the day, it's up to you whether you want to go for this tower or not. Its plus points are that it's good-looking, expandable and light.

However, its bad points are that the Zorro speed isn't quite up to a "proper" Zorro-based Amiga and you need to have an A4000-type accelerator in order to be able to use the Zorro slots in Zorro III mode, thus making for a rather expensive machine.

Having said that, towering your Amiga 1200 seems to be the most popular hobby for A1200 owners these days, so I'm sure there'll be a lot of people who want to go down the easy route and just buy this as a completely fresh machine. As you can certainly tell, I am ambivalent about this tower.

Technically, it's very impressive. It offers all the right things and, considering what you're paying for, the price seems fairly reasonable. On the other hand, I'm not certain that it's actually the best way to go.

Personally, I have the feeling that if I were in the same position I would be more keen on buying a second-hand machine – an A3000 or 4000 – but I can certainly understand people's reluctance to deal in the second-hand market, with something they don't really know about.

DISTRIBUTOR: Blittersoft (01908) 261466. PRICE: Varies.
Machine tested: £629.90 (£599.95 + £29.95 Video option).
REQUIREMENTS: A4000-style accelerator for Zorro III to be enabled.

SPEED: ●●●●○
Same as your A1200 but with the capacity for more memory

MANUAL: ●●●●○
Standard A1200 with Infinitiv extra.

ACCESSIBILITY: ●●●●●
Just plug it in and go. Simple.

FEATURES: ●●●●●
Zorro III, SCSI II, PCI, etc. Excellent.

VALUE: ●●●○○
Costs more than a secondhand A4000.

OVERALL VERDICT:
A nice new machine, but not a huge improvement over what you've got unless you spend the dough.

91%

CD-ROM drives

Ben Vost shows that he's got better drives than Tiger Woods, with a look at two new CD-ROM units.

Eyetech 20x

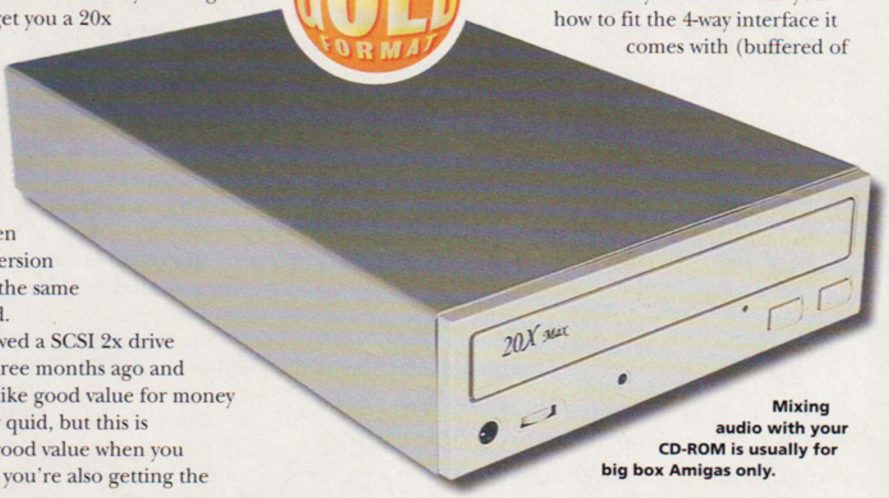
Eyetech have really come up with a winner with this new CD-ROM drive. A hundred of your English pounds will get you a 20x drive, add another twenty to that and get your audio mixed with the CD and another fifteen to get a full version of EZ-IDE at the same time. Not bad.

We reviewed a SCSI 2x drive only about three months ago and that seemed like good value for money at only eighty quid, but this is ridiculously good value when you consider that you're also getting the means to add another hard drive, if you so desire, and without needing to have a black box hanging off the left-hand side of your A1200.

The drive itself is fast and quiet with a very good response time and it is the only one that I've looked at for a long time that actually bothers to tell you how to fit the 4-way interface it comes with (buffered of course) inside the case of your A1200 instead of hanging out of the side.

In order to do this, you may need an extra 44-way cable, especially if the one with your A1200 is really short (about 1.5cm long), so bear that in mind first.

Overall, this is a very nice unit. If you haven't joined the CD-ROM revolution yet, with prices this low, now is definitely the time to do so.



Mixing audio with your CD-ROM is usually for big box Amigas only.

DISTRIBUTOR: Eyetech (01642) 713185
PRICE: £99.95 (mixer £19.95, 2.5" cabling £6, EZ-IDE software £17.50 later, £14.95 at the same time).

OVERALL VERDICT: If you go for the extras it's well worth your while, and even if you don't this is still excellent value for money!

94%

Power 24x

Coming with a full version of *IDE Fix 97*, this CD-ROM drive represents excellent value for money. It's also one of the more attractive drives I've seen, so if aesthetics are important to you, you can rest assured that this is a good-looking drive.

It's slightly faster than the one we had from Eyetech, but although reading a file is faster, it actually takes longer to find a file. I did the same test using *AFCDFind* on our CD and, although the Power CD-ROM drive I was supplied with actually read each index quicker, it also took nearly as long to find each index as it did to read it, making the search time longer. Installation of the drive is very easy and, like the Eyetech model, the Power CD-ROM drive comes with a 4-way buffered interface. However, although the Power model had a nice printed book to go with it, it didn't really explain how best to fit the said interface inside your A1200's cramped case. The CD-ROM drive itself was also more noisy than the Eyetech one.

DISTRIBUTOR: Power Computing (01234) 851500. PRICE: £119.95 (with full *IDE Fix 97* software, *Chaos Engine, Oscar, Diggers* and 4-way buffered IDE interface)

OVERALL VERDICT: Another good offering from Power and one guaranteed to fly off the shelves.

93%



Small and extremely good-looking, you'd be hard pushed to find a nicer CD than Power's.

COMPARISON

Both CD-ROM drives come with an AC adaptor instead of the more common "kettle" lead-type of power supply. This means that the cases used for the drives are little bigger than the drives themselves, a boon for those with little space.

Power score an extra point here because, whereas the Eyetech drive comes with a generic PSU with taped over settings switches, the Power drive comes with a dedicated power supply, which looks a little more professional.

Other than these points, both drives performed well enough and both offer extremely good value for money. As I said in the Eyetech drive review above, if you haven't already got yourself a CD-ROM drive, you should rush out and buy one as soon as you've read these reviews. Even if you have a 2x SCSI model with a Squirrel, perhaps you should think about replacing it now with a newer model.

Long term AF Review

Diavolo Pro

Backups are essential, and when floppies can't cut it, **Gary Leach** has the solution.



Even though it seems like just yesterday that I was backing up my 20Mb hard drive on an A500 using floppy disks, in these days of direct to hard disk audio/video recording and 3D rendering, storage requirements are much greater and floppy disks won't cut it.

My chosen backup hardware is an HP TS4000 Colorado Tape Streamer (SCSI). This backs up onto Travan TR-4 tapes which store up to 4Gb of data on one tape. Using the hardware compression mode, this has a theoretical capacity of 8Gb.

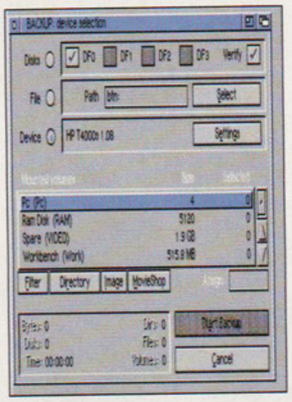
I purchased the internal model of the streamer and placed it in one of the drive bays on my DIY Tower. Connected up to the Cyberstorm MK II internal SCSI cable, the *cyberSCSI* software recognised it. I initially tried using various tape handlers and backup software downloaded from Aminet, but this was less than successful.

I then purchased *Diavolo Pro Backup*. This is without doubt the finest piece of backup software I have used. It allows full control of the tape device and can automatically configure the best options by running a series of tests with the tape drive, taking the guesswork out of setting up.

Once the *Diavolo* software has configured itself for using the tape driver hardware, it is possible to carry out the standard Backup, Compare and Restore operations that one would expect from any decent backup software.

BACKING UP

Selecting the backup option allows the input and output options to be selected. The file tree system for selecting which files to backup is particularly nice to use.



Choose how you want to back up, then what you want to back up.

Once the files to backup are selected, *Diavolo* lists the current contents of the tape. It maintains catalogues of what is on the tape and can thus help you when deciding if there is room for your backups.

Other software doesn't help with this and a manual record would be required. At about £25 for a tape, I want to make the most of the 4Gb capacity. In the case of the TS4000, it is not possible to overwrite part of the tape, only to append. This is a limitation of the hardware and not of *Diavolo* (which determines if part overwrites are allowed when configuring itself).

> *This is without doubt the finest piece of backup software I have used. It allows full control...*



***Diavolo Pro* keeps track of previously made backups so you can see what you may be overwriting.**

Diavolo provides continual feedback at all times: how much has been backed up, how much is left, how long it will take, and its estimates proved to be very reliable. After completing an operation it produces a statistics screen and reports on any errors, which I've never had in 12 months of use.

The processes of comparing and restoring backups all follow a similar route to the backing up process. *Diavolo* can even be asked to automatically rewind the tape and perform a comparison once the backup is finished.

Whether you're backing up to floppy, tape or Zip, I would recommend *Diavolo Pro* as the best backup software solution. For large backups, the TS4000 has behaved very well in use. There is something very satisfying about leaving a tape drive to back up and check 4Gb of video data while I go and watch TV!

Once I'd solved the problems (see below), the software and hardware has performed flawlessly. It's also interesting that, when in use, the tape drive backs up at 28Mb/minute. This is very close to the quoted maximum specification for the drive. When used with my Windows95 machine I was achieving 9Mb/minute. At 28Mb/minute, the tapes get *very* hot!

PROBLEMS

Initially I was getting random errors which I put this down to SCSI termination problems. Trying every single combination of jumpers and IDs, I was never fully satisfied.

The HP website has several firmware upgrades to the TS4000. There is a minimum recommendation of version 1.07 for use with Windows NT (mine was 1.05). The Amiga doesn't use NT, but this still rang warning bells in my head. The problem was how to upgrade the Firmware, download the patch executable and run it. However, the executable is a DOS/NT executable and so requires a PC with a SCSI card.

After borrowing a SCSI card for my PC and running the patch, I had no more problems using the tape drive with the Amiga. This raises a serious issue though – it is possible to connect all manner of devices, but most need access to patches and upgrades.

It may be possible to run a PC emulator which could use the *cyberscsi* device driver and update the tape drive from the Amiga. If this is possible, it may be worth buying such an emulator. I emailed HP about this and got a very blunt, "We do not support the Amiga OS". To think the Amiga was to have an HP PA-RISC chip...

BEN'S VERDICT

Although I'm not overly familiar with *Diavolo Pro,* I can't emphasise enough how important backing up your data is. You know that things are bound to go wrong when you are relying on them, and having an up-to-date backup is your only insurance against the unthinkable happening. While you'll have to go the Safe Harbor in the States to buy *Diavolo Pro*, you can bet it's a very worthy purchase indeed!

YOUR REVIEWS

Have you got any software or hardware you couldn't live without? Got any that you'd happily chuck in the bin? Write a fair and accurate review of about 750 words and you could see your work appear in *AF*!

We will also need some good photographs of the hardware under review and a passport photo of you. Send your reviews to: *Amiga Format* • Long Term Review • 30 Monmouth Street • Bath • Somerset • BA1 2BW

DISTRIBUTOR: Safe Harbor (USA) +1 414 548 8120 (email sales@sharbor.com)
Price: $98.00

OVERALL VERDICT:
If you need to manage large volume backups using tape streamers then there is no better solution than *Diavolo Pro Backup*.

95%

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AmigaLine, Russia, Moscow, Zorge 6. ☎ +7095 943 3941 or +7095 943 3871, email ambartsumian@glas.apc.org
An Amiga-oriented computer shop located in Moscow.

SPAIN

Club Byte, C/D. Juan de Mena, 21 bajo Izq, 46008 Valencia. ☎/fax (96) 3921567.

SWITZERLAND

Applimatic SA, Rte-de-Montreux 49, CH-1618 Châtel-St-Denis, Switzerland. ☎ +41 21 931431.

UK

Bolan Computing, 37A High Street, Staple Hill, Bristol, BS16 5HD. ☎/fax 0117 9140047.
Sells Amiga hardware and software, as well as offering repairs and upgrades. There is a selection of software on the shelf ready to buy and a load of Amiga and Siamese systems that are on display as well.

Classic, 11 Deansgate, Radcliffe, Manchester, ☎ 0161 7231638.
PD, commercial games, CD^{32}, CD-ROMs, hard drives, CD-ROM drives, A1200s, floppy drives, disks, modems. Free fitting service on hard drives.

Level 7, 113 Victoria Road West, Cleveleys. ☎ 01253 859004.

Planet Games, 3 Royal Oak Buildings, Waterloo Road, Blackpool. ☎ 01253 348738.

Game, Sheffield Town Centre. ☎ 0114 2729300.
Sells games and utility disks, and it is also possible for customers to reserve games.

Swops, Corner of Bold Street, Fleetwood. ☎ 01253 776977.

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Workbench

Music, memory Morse Code and more with John Kennedy.

AFCD28:-In_the_Mag-/Workbench



Write to: **Workbench • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW.**

CD32, FPU, TVM.

1 As I have a CD32, is there any way in which I can use an alternative CD filesystem alongside the built-in Commodore CD filesystem in the CD32's ROM? I know I can add filesystems to the floppy disk drives, like PC0: and one for a MGT Plus D formatted disk (used by ZX Spectrums) amongst others.

2 Is there a program or patch that will force a system-friendly program to use an FPU alongside my '020? I would like to use Directory Opus and several others.

3 Are there any games that use an FPU? If not, are there any patches that I could use that would enable me to use my FPU? The games that I am particularly interested in are *Doom, The Killing Grounds, UFO* and *Frontier.*

A. R. Price
Swindon

1 I don't know for sure but I shouldn't think that you can add a new CD-ROM file system. Most CD-ROM disks should work perfectly well in the CD32 (even if they need to have been re-mastered especially!) so you shouldn't need to replace it.

2 You cannot force a program to use an FPU. The program must have been compiled especially to take advantage of the extra instructions the FPU makes available.

3 Most games are designed to run as fast as possible on the simplest hardware available, and this means no FPUs. Most versions of Doom *for the Amiga I've seen don't require an FPU, although there are a few around which will use it. It doesn't seem to make a huge difference.*

THIS AND THAT

1 Can I use my Blizzard 1230 Mk IV accelerator if I put my Amiga in a tower? Is it PCMCIA compatible?

2 Will there be any project guides for *Cinema 4D*?

3 Will the TV Amazing (*AF106*) work on my Acorn monitor, and do I get stereo or am I better off getting a VCR to use as a TV tuner? This would be done by connecting the scart RGB output's port to my monitor's RGB input port, then connecting the composite video output port from the Amiga to the composite video input port on the VCR. Then it is just a matter of connecting the audio up.

4 Do I need to get a fan to keep my hard disk and the accelerator cool? If so, where should I put it?

5 Should I be getting any music, extra sound samples and background animation on *Super Street Fighter 2 Turbo* with the extra fast RAM?

6 I can't get the *leved* program working for *AB3DII-TKG*. I have installed it to my hard drive and assigned AB3: to Work:Games/TKG-EDITORS from Shell. Then I typed

SAVE THE A600!



1 I am considering buying an Apollo 630 accelerator and a 32Mb SIMM. If I bought the board could I still fit an internal 2.5" hard drive or would there not be enough room?

2 Does the Apollo 630 still allow the PCMCIA port to work (so I could possibly add a modem or SCSI hard drive)?

3 Is the A600 powerful enough to go on the Internet with or would it be too slow? Would the Apollo card make any difference to this?

4 If I did buy a modem, would I be able to use all the websites available to PC users, like the Yahoo search engine?

5 I am also considering the new Aura 16-bit sound sampler. Is it just a sampler or does it play back audio in 16-bit stereo as well? Can I use 16-bit samples in *OctaMED v4*?

6 Is there a PCMCIA interface that will let me connect a SCSI device (such as a hard drive) and a modem at the same time?

7 I know someone at school who is selling an A600 hard drive, but with no partitioning or installer software. Is there anywhere I can get a program to get it working, perhaps a PD company?

8 If I upgraded to Kickstart 3.1, what would the main advantages be? Could I use Workbench 3.1? Please don't try to persuade me to buy an A1200 as I am quite happy with my A600 as it is nice and compact.

Mark Wadham
St. Austell

If you really, really have to stick to the A600, then here are some answers to your questions. However, I would advise you not to spend another penny on the A600 and buy a second-hand A1200 instead. It's so much better, both in terms of performance and expansion flexibility. And it's not a huge amount larger either. Really, it would be so much better for what you want to use your A600 for.

1 As the internal 2.5" drive bay partly covers the A600's 68000 processor, this makes fitting an accelerator and a hard drive difficult. However, if you don't mind the drive not sitting in its cradle but being wedged to the side slightly instead, you should be able to pack them both in.

2 The Apollo '030 card is PCMCIA friendly, as are most '030 cards. Fitting a PCMCIA modem card is a nice idea but I've only just discovered driver software for this on Aminet, so I don't know if it actually works. We plan to report on this in the next issue or so. A SCSI interface, such as the HiSoft Squirrel, will work fine.

3 The A600 could be used on the Internet. It would be happy sending mail, reading news and so on, but it could probably just about work as a Web browser. It would be terribly slow though, even with the accelerator fitted.

4 Yes. The point of the Internet is that it's (largely) platform independent. As long as your software speaks the protocols (TCP/IP, HTML and so on) you can look at any site that a PC or Mac can. Some of the more advanced features (Java, Active HTML and so on) will be missing, but most of the Web will be available to you. Slowly.

5 Yes, it can play back as well as record in 16-bit quality. Compatibility with Octamed was always a bit of a sore point and I don't believe it was ever completely sorted out.

6 If you got a Surf Squirrel you would then have a high speed serial port, along with a SCSI controller to connect both your modem and a hard drive/CD-ROM. You could also buy a cheaper Classic Squirrel and just connect your modem to your standard serial port, although it may be slower.

7 Yes, most PD libraries should be able to sort you out with HD Prep-ing software.

8 An upgrade to Workbench 3.1 would be almost totally useless for an A600. You don't need the 256-colour Workbench support (because your A600 cannot and never will work with a graphics card) and the CD filesystem requires a CD-ROM drive, which you haven't mentioned. However, nearly all Internet programs require it.

Yes, I am scathing of the A600. This is because it's a nasty little piece of work which was originally misrepresented as a replacement for the A500, a machine which offered so much more expansion.

AB3: then LEVED. Can you help or do I need an FPU to run *leved*?

7. I want to get a CD-ROM drive, but is the best option, IDE or SCSI?

8. Can you put a demo of *Photogenic* on your CD and will you be putting on a demo of *Quake* when you finally get it?

S. P. Fox
Barnsley

1. It should fit happily in a tower and all the ones you can buy are designed to house the A1200 and accelerator cards. Yes, it is PCMCIA compatible.

2. What, another one? We've already run a multipart series. Call the Back Issues department on 01458 271102.

3. No, it won't work with your Acorn monitor. If you read the review carefully you will see that it generates SVGA compatible video output, not the 15KHz signal which your Amiga outputs and the Acorn monitor accepts. The TV Amazing is not a NICAM stereo decoder and so you won't get stereo output. You are definitely better off using a VCR as a tuner because, unlike the TV Amazing, it will work with your monitor.



If you missed our *Cinema 4D* tutorial, give our Back Issues department a call.

4. No, if your accelerator didn't come with a fan then you probably don't need one. There isn't a lot of space inside an A1200 to fit a fan anyway.

5. Sorry, games aren't my forte so I don't know the answer to that one.

6. Again, I've no idea. Best write in and ask Andy Smith. It's about time he started earning his money and wrote an "Ask Andy" column.

7. There isn't much between them, except that IDE is cheaper. Go for IDE.

8. We had a QuakePlayer *demo on* AFCD26, *but we won't be putting one on floppy as it's too big. You'll need a CD-ROM and FPU to play the full game anyway.*

Feedback

The Memory or RAM? question in *AF109* from David McCann could have had a bit of extra information, specifically that the CD^{32} also has a Y/C connector on the back which can be used with some models of the 1084S monitor to give a clearer signal than the composite.

You simply need a Y/C to phono lead from any video dealer to connect to the separate Luma and Chroma inputs on the back of the 1084S.

Alan Wiggins
Oxford

In response to the letter from Nick Abbott in *AF110*, could I just say that I've bought memory, a 1.2Gb EIDE hard drive, a CD-ROM drive and a scanner from PC magazines and used them all on my Amiga with no problems at all, saving myself a bundle in the process.

As long as we have good companies like Eyetech who can provide us with advice, the right leads and driver software, there is nothing to fear from buying hardware in this way. That's all. I read you every month.

Malcolm Douglas
Liverpool

The only good thing about the A600 is that it is very small (the smallest Amiga made) and it has a PCMCIA port and IDE interface. Other than that, I hate the little things. And yes, I do own one. It's sitting under my desk, minus the PSU and floppy drive which it donated to a sickly A1200. The A1200 is an order of magnitude better. Get one.

A1200 DOWNGRADE

I recently bought a second-hand A1200 (unexpanded). However, I also have an A600 which has been expanded with a Viper 630 from Power Computing. My problem is that I cannot sell off or exchange the viper 630 because it was a present (and I don't really want to sell it because it still works perfectly!).

I'd like to know how I can connect the A1200 and A600 so I can use the AGA chip, etc, and the '030 and 4Mb memory. Please can you tell me what hardware/software I need and how to connect it? Also, can I put both motherboards in a tower?

Ross Whiteford
Abernethy

What is this obsession with the A600? It's rapidly becoming the cult Amiga. OK, so it's nice and small, but it's still incredibly slow and difficult to expand!

You cannot realistically merge the two Amigas and use the A1200's AGA chipset and the A600's memory and processor. It doesn't work that way. All you can do is link the two computers using a network such as Parnet and share drives. You cannot share memory, nor run programs using the other's hardware. Sorry!

Yes, you could probably squeeze both the A600 and A1200 into a single tower case, but for the love of Pete, why?

PORTABLE AMIGA

1. In Autumn I'll be going to University and though I'd like to take my Amiga with me I feel uneasy about leaving my trusty old A1230/50 in a dodgy shared house or student accommodation, so I've resolved to go slightly mad without it.

I'll still need some sort of computer though, as my handwriting looks like Arabic written by a blind man with no hands (and that's on a good day), so some sort of portable system seems appropriate. I had the rather crazy idea of putting a compact A600 motherboard into a PC laptop case. Is this possible?

If so, what parts would I need, what would it cost and why hasn't one been made yet?

2. As it's highly unlikely that any of this is possible, what other laptop solutions are there? I obviously need something that can at least do the binary equivalent of pass the time of day with my Amiga, perhaps with a serial link-up or maybe just plain old sneakernet.

3. I only really need some kind of text editor with a disk drive, so I suppose I could lower myself to buying a PC laptop if all else fails. What integration software would I need?

John Bankier
Preston

1. Putting an A600 in a PC laptop case is a bit of a non-starter. Although the A600 is small, the PC is likely to be smaller. All the PC's parts will be designed especially to fit into that particular case and there is no way you can shoehorn a completely different motherboard in there. In any event, you can't buy laptop cases in the same way you can buy desktop cases.

2. You could do what some dedicated owners have done and built their own laptop system, using an LCD screen and a custom made box. Extreme? You bet. Expensive? Yes, probably.

I would actually suggest you find a second-hand Amstrad NC100 or NC200 system. These are cheap, fairly rugged and have a good version of the Protext word processor which is ideal for essays and the like. You can either connect them via a serial port to an Amiga, or make use of their PCMCIA Static RAM cards and a utility I found on Aminet to swap data to and fro. Excellent.

***3. If you do manage to find a laptop PC which fits the bill (and remember, for word processing even an 80286 will do at a pinch) then using a floppy disk is by far the simplest solution. Otherwise use a null modem cable and either terminal software or a utility such as* FileExpress.**

Alternatively you could try the excellent* Network PC *from Weird Science on (0116) 246 3800, which not only works well but is cheap too.

THE AMIGA EFFECT

I have recently bought an A1200 to which I have added a Viper Mk II accelerator board (no FPU) with 8Mb and a 1.4Gb 2.5" drive. I managed to pick up a monitor (NEC MultiSync 4FG) cheaply, which provides a reasonably crisp picture for the Amiga's higher res modes. It won't display the lower res modes but at least I can word process without my eyeballs dropping out.

I want to get more out of my Amiga and, specifically, I am interested in using the sort of software which is used in film and television to produce special effects.

Can you recommend a software package I could use and what would I need in the way of hardware to upgrade my present system in order to run it?

I am on a limited budget and would hope to build my present system up gradually to the required specification.

Stephen Good
London

I assume you want to create 3D images and animations here, although it's possible you might want to play around with a genlock as well – it depends what you mean by "special effects". Let's assume you want to create giant flying saucers, or asteroids hurtling towards the Earth – in this case you'll want something like Imagine, Cinema4D *or* Tornado.

These are 3D programs that can create realistic views of objects defined as models. So, you can build up a spaceship in the program's editor and then render a view of it orbiting the earth. Then you can make it move, create an animation and record it all back to video tape.

Continued overleaf ➡

If you want to get into rendering then buy an FPU as it will speed things up a great deal and they aren't too expensive.

If you want to mix live action from a camera with Amiga graphics then you'll need a genlock. This is a box which mixes the two signals and allows you to add subtitles and other overlay effects. They cost from about £100 upwards.



A genlock is a vital bit of kit for those who want to dabble with video and graphics.

DRAM AND BLAST

1. What type of memory do the new PPC boards use?
2. What is the difference between these types of memory: 32Mb 72-pin EDO SIMM, 32Mb 72-pin SIMM parity, 32Mb 72-pin SIMM no parity, DIMMs and SDRAM?
3. Will any make or type of 3.5" 3.2Gb hard drive work in my A1200T?
4. What software do I use to format and partition the hard drive and could you put it in the Reader Requests drawer on the coverdisk?
5. When will you put some Amiga stickers on the front cover?

Alexi Tzitzas
Dukinfield

1. Standard SIMMs, although they must be used in matching pairs on the CyberstormPPC. The Blizzard 603ePPC card can use single SIMMs, but if you use two, they must be the same speed.

2. When a SIMM offers "Parity", it has an extra bit for each word stored in the memory. This is used by some systems (OK, some PCs) to confirm that the memory isn't making mistakes. Modern memory is usually reliable enough to do without parity checking and the Amiga doesn't use it at all. "SIMMs" and "no parity SIMMs" are the same thing.

Some PC's now have DIMM sockets, which are "Dual In-line Memory Modules" as opposed to being "Single In-line Memory Modules". This means they have more pins – 168 instead of 72. They are slightly larger because they are effectively two SIMMs in one board, so you can use one where you would need two matched SIMMs. DIMMs require a specific socket – you can't just cram them into a SIMM socket.

SDRAM is a type of DIMM. It stands for "Synchronous Dynamic Random Access Memory", and it works slightly differently from other memory chips in the way it matches its timing signals to the processor. It's more important with very fast Pentiums which run their motherboards at high speeds.

3. Impossible to say for sure, but in theory at least, yes – as long as they are EIDE compatible they should work with your Amiga. As long as you have suitable connection cables and you can satisfy their power requirements then you should be OK.

Workbench

10 things to do when:

You want to make the most of sound

1. The Amiga's default sound output is a stereo, 4 channel, 8-bit audio signal through a pair of photo sockets at the rear. You'll need to amplify these signals before you can hear them, either with powered speakers or through a connection to a monitor.

2. The speakers included in monitors and televisions are rarely hi-fi quality, and the tiny little "multimedia" speakers you see aren't either. The Amiga sounds so much better when it is played back through the AUX input on a decent music system.

3. Although 8-bit sounds are less impressive than 16-bit audio, that hasn't stopped musicians creating some stunning tunes. Download a MOD file player and the latest MOD files from Aminet and be prepared to be very impressed indeed.

4. Get *OctaMED* and start creating your own tunes! With no extra hardware, you can compose you own four, eight or more channel musical masterpieces. As the latest *SoundStudio* versions of *OctaMED* use software mixing, the faster your Amiga the better the results.

5. If you want professional quality sounds, buy a MIDI interface module and an external MIDI synthesiser. With sequencing programs such as *Music-X* or *SequencerOne* you can create your own top-quality recordings.

6. Check out MP3. This is a new file compression system which can pack audio down to a fraction of its original size. Some Amiga MP3 players can play back at 12-bit quality, using tricks with the Amiga hardware.

7. If you are using small speakers, keep them away from your floppy disks and monitors. The magnets in the speakers can erase your disks and warp the colours on the monitor. The more expensive speakers are "magnetically shielded" to stop this from happening.

8. Capture your own sounds using a "sound sampler" cartridge which connects to the parallel port. With a sampler you can record your own effects and instrument sounds for use in programs like *OctaMED.*

9. If you have a big box Amiga, it's possible to enhance your audio hardware by buying extra hardware. Thanks to the AHI standard, there are now plenty of applications which can make use of audio hardware such as the Prelude Zorro card or Concierto module for the Picasso IV graphics card.

10. If you have a CD-ROM drive, remember that it can play back ordinary music CDs. There are many free CD player utilities which allow you to control the drive, and you can either listen over headphones or by connecting up the audio outputs to an amplifier and speakers.



4. The software you need is HDToolbox *or an equivalent third-party tool. I'll pass your request on to the coverdisk people.*

5. A very good idea – people can stick them on public transport, car bonnets and try to plaster them over celebrities, as well as using them to add a touch of class to their Amiga systems. Perhaps the crack AF *art team could design some inch square logos in the meantime...*

Finally, you get some Amiga stickers! Erm, that aren't really that sticky at all. But with a dab of glue and a bit of imagination...



MEMORY INTERFERENCE

1. I have an A1200 with a 170Mb IBM HD and an 8Mb RAM expansion. I would like to know if there is any way to tell if the RAM interferes with the PCMCIA port. On the Early Startup screen it recognises the RAM and the card port. Does this mean that it does not interfere?

If the RAM does interfere, could I use the *NoFastMem* utility to close it off and then be able to use the port?

2. Can I use any bog-standard PC printer off the shelf of a high street shop like Dixons as long as I have the correct driver for it?

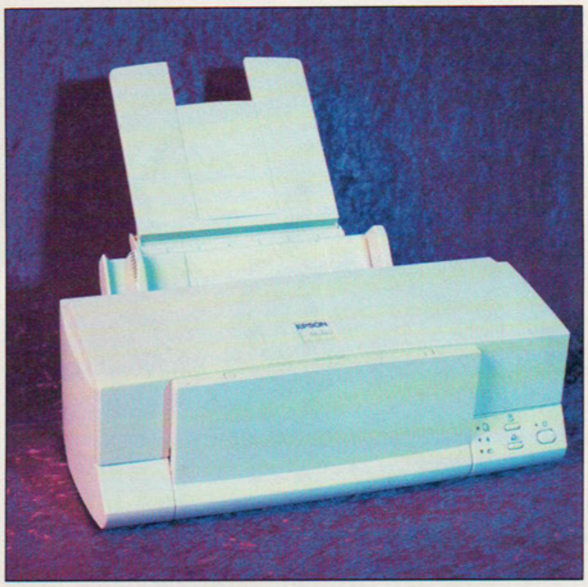
3. Is there a way in which it is possible to put pictures in program windows, such as the Shell?

Ian Wilson
Aberdeen

1. The problem occurs because the PCMCIA has a slot 4Mb wide reserved in the Amiga's memory map. This means that memory cards or other devices which are inserted into the slot will appear to the Amiga to be present at specific addresses.

If you also have ordinary memory in these locations – which some expansion cards do – there will be problems.

Effectively, anything connected to the PCMCIA port will simply temporarily cease



to function. This doesn't usually happen with accelerator cards (cards with their own processors) as they map any extra memory in their own address space, not having to share it with the rest of the Amiga.

Therefore, theoretically, you should be able to perform a NoFastMem *and get your PCMCIA slot back. However, the best bet is a memory card which either avoids that conflict in the first place, or which uses a 68030/'040/'060.*

If you're having trouble deciding on a printer and driver software, check out our huge guide in issue 109.

2. Yes, exactly. Obviously, it makes sense to shop around for the driver software first and then select the printer.

The huge round-up a couple of issues ago (AF109) should help you, and you'll be pleased to note that you can buy excellent printers such as the Epson Stylus 600 or HP Deskjet 670 and use them with no problems on the Amiga.

3. If you're asking if it is possible to add a backdrop picture to the Shell in the same way as you can to the Workbench background and open drawer window, then the answer is no – not usually.

The background in the window opened by a program is controlled by that specific program and so it would be a feature of the particular application. If the program uses Magic User Interface then you might find that it is possible.

As for the Shell, it is almost definitely not possible. Although someone may have written a Shell replacement with pretty pictures in the background, by default it's definitely text only.

INSPECT YOUR MORSE?

I hope that you or one of the talented programmers out there can help me. I want a program which decodes Morse Code into text. I have been unable to locate such a program for the Amiga, either commercial or PD, so I have come to the conclusion that I shall have to write one myself. At first I thought it would be easy because such programs existed for the PC, Commodore C64 and even the Spectrum, so an A1200 is obviously up to the job – however, I am not.

The idea is to take the audio output from a radio and pass it through some hardware, which I have details of, the output of which is a digital high when the person transmitting has the key down, when a dot or a dash is being sent, and low when nothing is being sent. This will ideally be connected to a pin on the serial port so I can leave the printer connected to the parallel port.

The program will have to measure the length of time the input goes high, decide if it is a dot or a dash and also measure the space between the highs to know the difference between inter letter spaces the end of a letter and the end of a word.

The dot is the unit of measurement. A dash is equal to three dots. The space between dots and dashes is the length of one dot. The space between letters is three dots and the space between words is seven dots.

If all Morse was sent at the same speed by machine then life would be a lot easier, but it is not. The speed can vary between five and 60 words a minute, there are five letters to a word and some is sent by hand so that the length of dots and dashes can be constantly changing, even though the ratio between the two remains approximately three to one. Spaces can be a lot longer as people pause to think. The program will therefore have to constantly monitor the length of the digital highs and lows.

If it can be done on a C64 it can obviously be done on an Amiga, but how? Reading through my back issues of *AF* and *Amiga Shopper*, which go back to 1993, has not helped me as I am unable to find out how to read an input from the outside world, with the exception of the mouse/joystick ports, let alone how to measure its length.

D. J. March
Sheffield

Thanks for one of the more interesting letters we've received. Yes, it's possible to write software like this, but it's not easy. Anything which deals with processing information from the "real world" is a nightmare, with different timings and so on.

First of all, by far the easiest way to interface the circuit with your Amiga is to use the second joystick port. Not only is this easy to implement in hardware (a small reed relay will do the trick) but all programming languages make it a simple matter to read the joystick port settings. Try a language such as AMOS *or* Blitz Basic *to get started.*

(An alternative approach is to use a sampler, connected directly to the output of the radio. This would do without the conversion circuit, although the programming would be more complicated, especially if you wanted to perform it in real time. The simplest solution would be to sample the audio to disk and process it afterwards).

OK, assuming your joystick port is now switching itself on and off in time to the Morse digits, you'll have to start programming. When the first signal arrives, you won't know if it's a dot or a dash so you'll have to start a timer going. When the signal stops, stop the timer – this gives you the period of the first bleep. You'll have to repeat this a few times so your program can determine the length of dots and dashes and distinguish between them. You'll also have to start another timer when the tone stops, so you can measure silence – longer silences will indicate the gaps between words.

Once the program knows the difference, you can write a routine which accepts incoming dots and dashes, compiles them and looks them up when they make a letter. It's not going to be easy, but it's a fascinating project and I hope you'll let us know how you get on. I'm sure if any programming readers fancy a challenge, they can write in and we'll pass on the details.

IF YOU HAVE A QUERY...

At *Amiga Format* we aim to answer as many questions as possible. Unlike some magazines, we don't just concentrate on our areas of expertise – we take on all your problems (as long as an Amiga is involved). Here are a few tips on sending in questions:



John Kennedy.

- Be concise.
- Detail the problem as best as you can.
- Describe the events that caused the problem.
- Give full details of your equipment.
- Make sure your question is relevant and wouldn't be more easily solved by contacting the dealer from whom you bought the goods.

Bear these points in mind and fill in, photocopy, or copy the form below as best you can. Unfortunately we cannot reply personally.

Send your letters to Workbench, *Amiga Format*, 30 Monmouth Street, Bath, Avon BA1 2BW.

Your Amiga:

○ A500 ○ A500 Plus ○ A600
○ A1000 ○ A1200 ○ A1500
○ A2000 ○ A3000 ○ A4000

Kickstart version

○ 1.2 ○ 1.3 ○ 2.x ○ 3.x

Hard Disk: .... Mb

Manufacturer: ....

Extra RAM fitted – type, size, (Mb) and manufacturer:

....

....

Details of other hardware:

....

....



Amiga.net

Dave Cusick takes a look at some of the more interesting services that are available online.

CONTACT POINT

I can be reached with comments, suggestions and feedback at dave@dcus.demon.co.uk, or via my Web site at http://www.dcus.demon.co.uk/.

Everybody knows about the potential for online commerce and I suspect there are a fair few of you out there who, like me, regularly buy things like books and computer software over the Internet. What many people probably aren't aware of, however, is the multitude of other services available online.



You can order your favourite wines online, from stores like Sainsbury's or from more specialist dealers.

> *And why stop there? Whatever you are after, the chances are that you can order it online nowadays...*

Let's start with the basics. Despite all the hype surrounding the Web in particular, email is still by far the most widely used aspect of the Internet.

The great thing about email is its informality; on the spur of the moment I've decided to contact people all over the world via email, and I never cease to be amazed by not only how willing most people are to respond, but also by the number of people whose emails to me are quite obviously equally spontaneous and chatty.

If you don't know the email address of the person you want to get in touch with then you can consult services such as Bigfoot or Four11 to see if it's listed there. These days almost everyone seems to have an email address and those who don't are often still reachable via forwarding services. If you want to contact a celebrity, for instance, take a look at CelebrityE-mail.com and send a message from there.

If your celebrity of choice doesn't have an email address, they say they will forward it by snail mail.

The same page also offers an email reminder service which should help to make sure you don't forget birthdays, anniversaries and the like, and a register of recently changed email addresses, to which you can add your name if you've just switched ISPs.



Tacky merchandise ahoy – it's Sci-Fi UK.

Only this afternoon I had an email from a PC-owning friend asking if I knew of any way in which he could use his machine to send faxes to people, without him having to install the truly abominable Microsoft Exchange software.

I told him the most obvious solution was to use an email to fax gateway so that he could stick with his usual email client. Email to fax gateways work on a simple premise – you email a message to them with a fancy address containing details of exactly where it has to end up, and they will forward it for you. It's easy, it's convenient and it's often free, particularly if your ISP happens to offer such a service, which mine, Demon Internet, does.

There are few things you can't do by email. There are services which allow to you to fetch Web pages and file archives from your trusty email client (send an email to drbob@mailback.com to receive an automatic response explaining how). You don't necessarily even need an account with an ISP in order to have an email account because you can get yourself a free email account, as I discussed back in *AF107*.

If you don't want someone to know who has sent them an email, you could always send it anonymously. Enter "Anonymous mailer" into Yahoo and you'll find a whole host of sites offering this service – just don't abuse them.

There are few areas of modern life that the Internet doesn't touch on, so whatever you are planning to do, it is often worth taking a look online to see if there are any tools which you can use to your advantage.

Imagine, for instance, that you're planning to travel to the opposite end of the country to see some friends, but you don't have a decent road map and you are not exactly sure how to get there. All you need to do is consult UK Streetmaps or UKOnline's Map section, download a map of the appropriate area and print it out so that you have it handy for reference on your journey.

Indeed, the UKOnline site has an awful lot of other useful travel stuff that's worth looking at as well.

While you're online you could check the weather forecast in that part of the world by picking a town from the lengthy list at the Yahoo Weather Site, and you could see if there are any particularly interesting places to visit nearby using the UKOnline regional guide – it's not quite as comprehensive as it might be, but it's a good start.



If you're planning a trip to sample the beautiful, healthy, sparkling spa-water of Bath, Avon, you may want to consult Streetmap UK.

Alternatively, if you want to find out what's on at the local cinema, don't bother wading through page after page of teletext as it always takes hours to cycle through to the one listing the films showing nearby.

Just bookmark the Web page relating to your friendly neighbourhood picturehouse at the Yell FilmFinder site and you can call up an up-to-date listing in seconds whenever you fancy watching the latest Leonardo DiCaprio cheesefest or Sharon Stone thriller.

If concerts or theatre are more your cup of tea, take a look at the UKOnline Entertainment Guide to find out what's on. And why stop there? Whatever you are after, the chances are that you can order it online nowadays, although if it's more than a bit of information you want, you are going to have to pay for it.

In the last year or so, online commerce has really started to take off in the UK. Fancy sending your nearest and dearest some flowers? You could take a look at Silcocks, a Manchester-based company, or the London-based August Florists. Both of these allow you to order flowers online to be sent anywhere in the UK.

Want to send them a piece of tacky *Star Wars* merchandise instead? No problem – visit Sci-Fi UK. Want to do all your shopping from the comfort of your computer chair? Tesco has offered online shopping in parts of London and Leeds for some time, and Sainsburys will deliver wine and flowers.

You can even buy fresh fish on the Web through companies such as Ghillies, a Scottish specialist whose site provides an online shopping service.

Soon you might not need to go into town to buy clothes either. You can order Shetland Knitwear online, or even men's swimwear, underwear and thongs from the likes of Kiniki.

The book and CD suppliers who pioneered e-commerce are no longer alone in the online ether, but there are still gifts you can send from the Web which won't cost you a penny.

If you want to send a cheesy online postcard then you will certainly save yourself some money. Take a look at Cat's Online Postcard Shop, which lets you design and send your own cards (provided you have a Javascript-compatible browser) and also offers links to scores of other postcard sites.

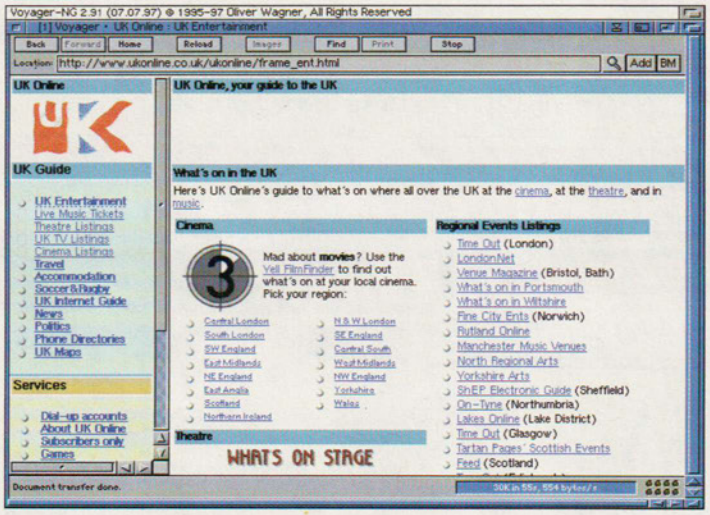
> ...whatever you are planning to do, it is often worth taking a look online to see if there are any tools you can use...





From flowers to thongs, almost everything is available online over the net.





UKOnline might contain the odd knackered GIF, but it's chock-full of useful information.

SITES OF INTEREST

August Florist: http://www.augustflorist.com
Bigfoot: http://www.bigfoot.com/
Bookpages: http://www.bookpages.co.uk/
Cat's Online Postcard Shop: http://eccentrica.com/user/Cat/Cards.htm
CD Zone: http://www.cdzone.co.uk/
Celebrity E-mail: http://www.celebrityemail.com/
Four11: http://www.four11.com/
Ghillies: http://www.highlandtrail.co.uk/highlandtrail/fish3.html
Kiniki: http://www.kiniki.com/
Sainsbury's: http://www.sainsburys.co.uk/
Sci-Fi UK: http://www.scifi-uk.com/
Silcocks: http://www.apple-net.com/silcocks/
Shetland Knitwear: http://www.zetnet.co.uk/ska/
Tesco: http://www.tesco.co.uk/
UKOnline Entertainment Guide: http://www.ukonline.co.uk/ukonline/frame_ent.html
UKOnline Maps: http://www.ukonline.co.uk/ukonline/frame_map.html
UKOnline Travel: http://www.ukonline.co.uk/ukonline/frame_trav.html
UK Streetmaps: http://www.streetmap.co.uk/
Yahoo Weather: http://weather.yahoo.com/regional/United_Kingdom.html
Yell FilmFinder: http://www.yell.co.uk/yell/ff/

Please note that companies mentioned in these pages are only intended to provide an illustration of the sorts of services available online – don't take inclusion here to be any sort of recommendation of a particular company over any other.

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CREATIVE

The indispensable guide to getting the most out of your software

We were very pleased to see the raw data from our reader survey recently. As far as this section is concerned, we were surprised to find just how many people were actually following the tutorials. It's a good thing too, as I know everyone who writes them puts in a lot of time and effort.

Ash Thomas has been hard at work this month explaining how to personalise your icons, and I put in more than a few hours of work researching the different types of structured graphics available and how to get your Amiga to use them. I'm sure John Kennedy and Simon Goodwin weren't slacking much either, so keep reading and keep sending us your ideas!

Nick Veitch



SEND IT IN!

WE NEED YOUR INPUT.

Is there something that you would like to see covered in one of the current tutorial series? Why not send your suggestion to us at the magazine. Here are some things you might like to think about:

PROGRAMMING

Is there a language you can't get to grips with? Or maybe you want to know how to do a specific thing in C or ARexx? You might never find the answer unless you write in and tell us about it!

UNDER THE BONNET

Unsure of how how your Amiga really works. Not sure if you are getting the best from your hardware - write to us.

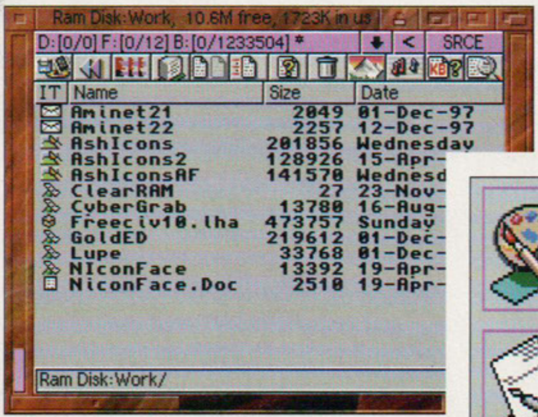
GRAPHICS

Is there something you desperately want to be able to draw? Drop us a line! Contact us at:

AF Creative • 30 Monmouth Street
Bath • Somerset BA1 2BW
Or email: amformat@futurenet.co.uk
putting "Creative" in the subject line.

78 ICONS

Design your own, unique icons in the second tutorial in this series. **Ash Thomas** explains all...

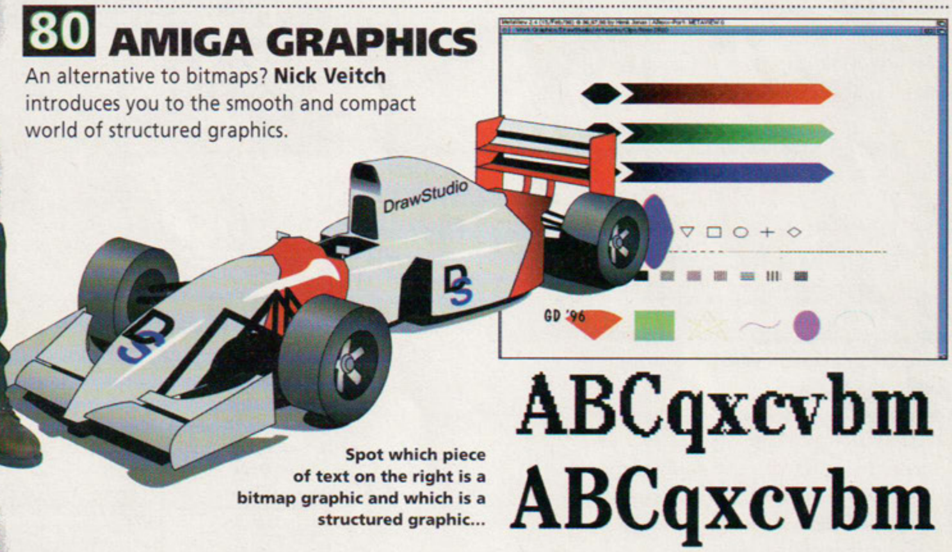




Brighten up your Workbench with your own customised and personalised icons.

80 AMIGA GRAPHICS

An alternative to bitmaps? **Nick Veitch** introduces you to the smooth and compact world of structured graphics.



Spot which piece of text on the right is a bitmap graphic and which is a structured graphic...

82 C FOR YOURSELF

John Kennedy holds your hand while you write your very own C program.

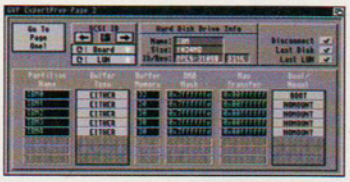
```
struct Library *IntuitionBase;
IntuitionBase = OpenLibrary("intuition.library",37);

    if (IntuitionBase!=NULL)
    {
        // Do what needs doing
        CloseLibrary((struct Library *)IntuitionBase);
    }
```

84 UNDER THE BONNET



Nearly everything you could ever want to know about drive interfaces, explained by the highly intelligent **Simon Goodwin**.



Our series for more experienced Amiga users gets to grips with the mechanics of drive interfaces.

Amiga Icons

Bored of your boring, old icons? Ash Thomas explains how you can create your very own.

AFCD28:-In_the_mag-/Icons

ON THIS MONTH'S CD

One question many die-hard CLI fans will ask is, do we need icons? If you are unfamiliar with the operating system you will rely on the most intuitive way to use it.

Often the easiest way to run programs is the standard point-and-click method which is provided by all modern systems, but it is also the slowest way to use the computer. When the user is more comfortable with the OS they will start to look towards faster methods of operating their Amiga.

The Shell provides a different way to edit, copy, rename and do many other operations with the same result as using Workbench, the advantage being that it is faster than using icons.

> "...devices, toolbars, appicons, dock buttons and start menus are all examples of icons that appear on the desktop."

File management can be done using the CLI and programs can be run by using ToolsDaemon, ToolsManager or start menus. These all provide a fast, single-click alternative to going through drawers looking for the program's icon to double-click on.

Directory Opus has semi-configurable menus, start buttons and dock buttons all built into its window manager. Name listers are also used in Opus as they are a novel way to replace the icon window, working in the same way as Workbench's "view by name", but are many times more powerful.

It isn't surprising that many people never use or look at icons as they use alternative ways to operate their computers. So do we really need icons?

I would say that icons are a vital part of the operating system and they are paramount to using the computer. Beginners will use icons for long periods of time as they get introduced to learning how operating systems work.

Icons can convey more information than a text string and some paint packages save out icons as a small version of the picture they represent. This "automatic thumbnailing" isn't visible from the CLI and speeds up the process of selecting pictures. Being an Opus and name mode fan I still use icon mode as it is more intuitive and much easier to use. Icons will always be visible on the Workbench screen: devices, toolbars, appicons, dock buttons and start menus are all examples of icons that appear on the desktop.

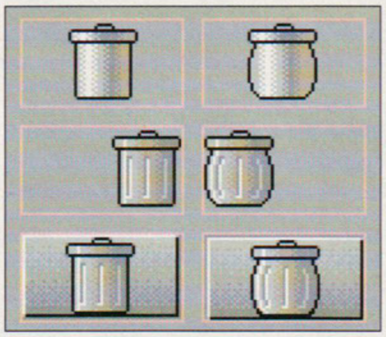
Icons are important and they will be a part of the operating system for the foreseeable future. The question is, do you like the ones you see?

After installing *MagicWB* for the first time, I found myself playing with the icons and settings. I reduced the green content in the greys which made them all slightly purple and gave the whole Workbench a purple hew. I used iconupdate to copy supplied icons over to appropriate program icons and *MagicWB* spread over my hard drive.

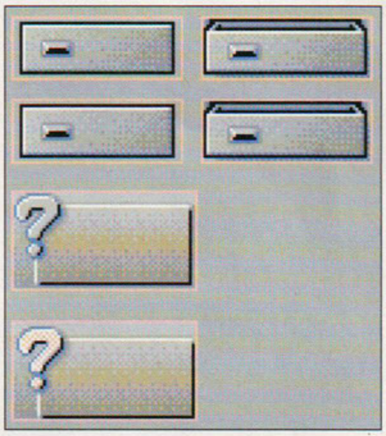
I then started using parts of other icons to form completely different icons. Finally, I started drawing my own from scratch as, like many people, I found some programs didn't have one or I didn't like the ones supplied.

Contents

Missed a tutorial in this series? Call our back issue hotline on 01458 271102 or see page 51.



Here you can see the development of a trashcan – two are visible and they are both drawn off the background which is added at a later time.



Some icon templates ready to be worked on.

EDITORS

IconEd can be used to draw icons. It is the supplied editor that resides in the tools drawer on the Workbench partition of the hard drive. It works well and does the job for four and eight-colour screens, but it is very limited in terms of features and tools.

The first problem is that it uses the first four and the last four colours of the palette, and this is as silly as it sounds. Why Commodore chose to do it this way is beyond the sanest person. It causes confusion and restricts the colours that can be used with *IconEd*.

There are many useful tools missing in *IconEd:* there is no zoom control, no brush support or any rotation tools. It is good for simple editing and quick fixes,

but to draw your own icons you'll have to look at a dedicated paint package.

Iconian is a more advanced (Freeware) icon editor that provides the user with a respectable array of tools and overcomes the limitations of *IconEd*. It has a full toolbar and can save out icons in *MagicWB* and *NewIcon* format.

It isn't a bad program but the development of *Iconian* has ceased, with the editor moving on to other platforms. On balance, I find *Iconian* too slow and its saving methods are far from perfect.

My choice of paint programs is the excellent *Personal Paint* (or *PPaint)* which you got on the *AF110* coverdisks. *PPaint*, although not quite perfect, offers the best range of bitmap tools and is very easy to use. I use *PPaint* for most of my icon drawing, flicking to *DPaint* for small curves and rotated ellipses.

PPaint offers all the tools you could ever want, with full brush support, filters and many other features. I would definitely recommend using *PPaint*, especially as you all have a copy (if you haven't, see Back Issues on page 61).

FIRST STEPS

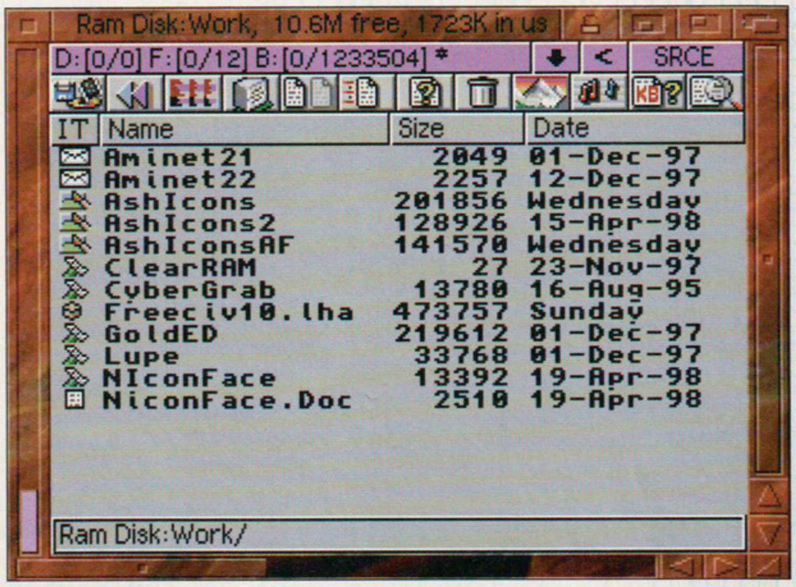
The first step to drawing an icon is to get a screen setup in the paint program and the most important part to this process is ensuring that the colours are correct. For icon sets like *MagicWB* and *NewIcons* you can find the RGB colour values in the docs and I've even included a *PPaint* palette for both sets, both of which are on the CD.

If the set doesn't have the colours documented, a palette program will tell you what the values are. Most sets follow a certain style and they often have similar parts to the icons which you'll want to have available when you start drawing. These 'building blocks' will be used time after time and they help you to establish a style.

MagicWB has a gradient backdrop, default drawer and default prefs icons. The set with *NewIcons* all have platforms of the same size and the prefs icons have a standard question mark design. It helps if all these parts are available in your paint program before you start drawing your own icons.

To grab these building blocks you can either convert the icons to a bitmap picture or use a screen-grabbing program (there are lots on Aminet). I use *Cybergrab*, which is designed for graphics card users but works fine for any screen mode. For *MagicWB* icons you can drag the image to *IconEd*, then copy and paste it into a paint package. For *NewIcons* you can use *Newicon2brush*, a Freeware utility which is on the CD.

Once the palette and the parts have been copied to the bitmap editor, the size of each icon needs to be set. *NewIcons* uses a standard 36x40 size for all icons (even drawers). Boxes which are 38x42 will show you the drawing area which is available for each icon. I have them in bright purple so it's easy to see, and purple isn't used very often.



My idea for the future of Opus/WB (above). Icons representing filetypes are on the left, and note how easy it is to spot emails or other filetypes with these icons.



Three icons in their normal and selected state, with one prefs template ready for an icon to be drawn.



The end of my toolbar. The first button runs an icon copier program called *NIconFace*, the recycle logo is the "initiate *NewIcons*" and the syringe is the "inject brush", which makes the *NewIcons*.

MagicWB's default icons can be set up so template icons with the gradient backdrop and button style are available in all the sizes. Once you have your boxes and building blocks to hand you can start creating the icons.

BITMAP TO ICON

Once you have the screen set up for drawing and you have created some wonderful pictures in a paint package, you will want to turn your masterpiece into an icon. This can be trickier than it sounds (especially with *NewIcons*), but *MagicWB* icons are easier to create.

> "To grab these building blocks you can either convert the icons to a bitmap picture or use a screen-grabbing program."

Cut out the image then copy it to the clipboard. With *PPaint* use the menu: brush, clipboard, write – it should have a shortcut (via the standard right-amiga c) but it doesn't seem to work. The normal icon on the clipboard can be pasted into *IconEd* (you can use right-amiga v for this) and the same can be done for the selected icon. It can then be saved as normal, and you have a great-looking *MagicWB* icon.

NewIcons are trickier to create as they work in a non-standard way. The standard and selected icons need to be saved out as brushes, then *InjectBrush* (a utility provided with the package) will convert the brushes to a *NewIcon*. It does the job well and even warns you if the images aren't in the standard palette or size. It sounds more complicated but the process can be simplified.

I use DOpus as a replacement window manager. On my setup, the dock bar at the bottom has two *NewIcon* buttons so I can create *NewIcons* with a single mouse-click. The first is a setup button which I press before I start creating *NewIcons*. It copies three files to the RAM disk: two are brushes called "1" and "2", the third is an icon called "i.info".

Files "1" and "2" are there so when I save a brush out I don't have to type its name in, I just hit "b" to activate the brush tool, cut the icon out and hit F6 to save the brush. I double click on "1" if it's the standard icon or "2" if I'm saving the selected icon. The "i.info" file is an icon ready to have the brushes injected into it. The second button then issues this line to the CLI: "C:InjectBrush 1 2 i" which creates my icon. These two buttons, one to initiate and one to create an icon, quickly make *NewIcons*.

You can now create your own icons, in whatever style you prefer. You can even create your own and replace all the Workbench icons. Next month I'll show you some drawing techniques to make your pictures seem more real.

Amiga Graphics

When is a graphic not a bitmap? Nick Veitch explains...

AFCD28:-In_the_mag-/Graphics

ON THIS MONTH'S CD

During our look at graphics so far we have seen how the Amiga handles bitmaps and the many different ways this data is stored. But this is not even half the story of graphics. The reason behind this is that there is a whole different world of graphics which owes nothing to bitmaps at all – structured graphics.

The idea behind structured art is that instead of storing exact information on every pixel of the image, only the instructions on how to draw the image are stored.

Contents

Missed a tutorial in this series? Call our back issue hotline on 01458 271102 or see page 51.

METAVIEW

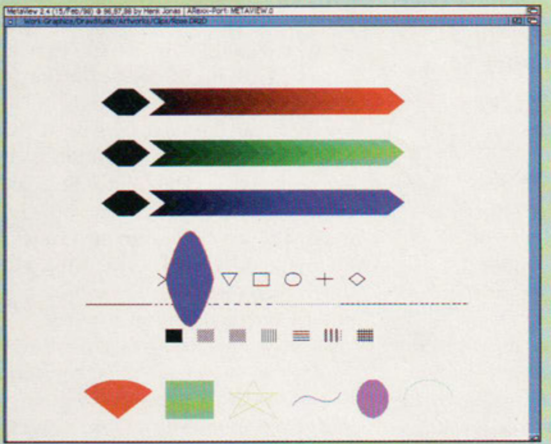
ON THIS MONTH'S CD

If you were thinking that structured art file formats are every bit as confusing as bitmap ones then you'd be right. Because of the way data can be expressed, some of these file formats are not even similar in nature. Fortunately, some help is at hand in the form of *Metaview*.

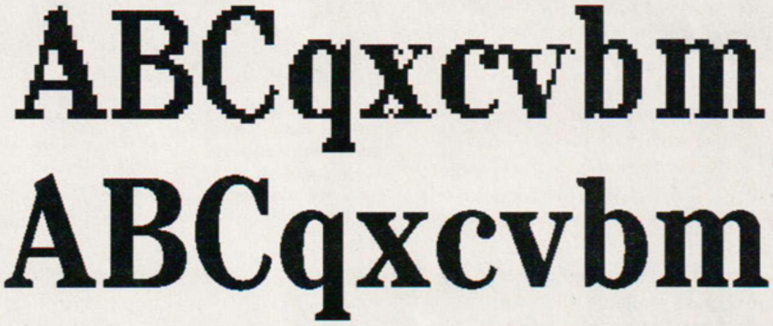
Metaview **is a program which was created to make it easy to display structured graphics originating on many different filesystems.**

Quite simply, it works by using a series of loaders to convert data into its own metaformat, which it can then display on screen. A selection of saver routines can then convert this metafile format back into a selection of different file formats, including EPS, DR2D and HPGL, which makes it rather useful for transferring files between different platforms.

The difficulty comes when the files include specialist types of objects, gradients or colour modes which *Metaview* doesn't recognise. For example, it can't handle *Drawstudio*'s transparency effect or many of its gradient fills, which is unfortunate. However, you can save out an EPS file directly from *Drawstudio*, so that's not such a big problem.



Metaview is available on Aminet (and this month's CD). It is very useful for converting artwork, but know its limitations first!



The picture above shows a bitmap version and a scaleable version of the same font. I suspect you can work out the difference for yourself. The clipart below is typical of the wide range of images available in structured format.



This has a number of advantages and disadvantages. The first and most important advantage is the scaleability of images created in this form. If you drew a circle in *PPaint*, say 60 pixels in diameter, it would probably look fine on screen. If you then printed it out to fill an A4 page, it would look like a large collection of squares, arranged in a circular fashion.

Conversely, a structured graphic would still look like a perfect circle with no rough edges. Because the graphic contains the information on how to draw the shapes, the output is scaled to the resolution of the output device (for example, a printer) or display.

Another advantage is that these files tend to be smaller than a corresponding bitmap, at least for simple objects. The *Amiga Format logo* in the structured format we use on the cover is only around 50K. If it was a bitmap, it would need to be about 5Mb to come out at the same resolution.

The disadvantage is that detailed, realistic images are almost impossible to create. Structured clip-art of real objects, like fax machines, cars, etc, is always very recognisable, due to the common elements of large blocks of flat colour or mathematically pure gradients. Producing photorealistic images this way is next to impossible.

BUT WHO USES THEM?

You do, for a start. The Agfa Compugraphic fonts included in Workbench are just a specialised form of structured graphics. They are only

special because they include additional information for character and line spacing and, in some cases, hints which adjust the shape of the characters to make them legible at smaller type sizes.

The kind of software which supports structured graphics tends to be concentrated in the design or DTP arena, but this does encompass some widely used software such as *Wordworth* and *Final Writer.*

> "The kind of software which supports structured graphics tends to be concentrated in the design or DTP arena..."

CAD drafting lends itself to structured art as well. For example, *AmiCAD,* on this month's subs disk, uses its own type of structured graphics format to design electronic circuits.

Common structured graphic formats

ENCAPSULATED POSTSCRIPT – This is the format preferred by a lot of software on the PC and Macintosh because it is very easy to handle. EPS files are essentially the raw Postscript data required to print the image, with a little packaging to allow DTP software to display previews, scale the image, etc. Bitmap graphics can also be encoded as EPS files if necessary (the ageing *ADPro* supports EPS saves)

DR2D – The Amiga IFF standard for structured graphics. Unsurprisingly, this is the one that is most widely supported on the Amiga, both by structured drawing software such as *DrawStudio* and by DTP and page layout software such as *Wordworth* and *PageStream.*

CGM – The Computer Graphics Metafile format is almost as old as the Amiga. While very few applications support it, it is often used as an exchange format between different platforms or file types. Unfortunately, as CGM is very old (1986) it doesn't support a lot of modern advances.

FIG – A very simplistic, UNIX-based format. There is a surprising amount of copyright-free material in this format.

HP2GL – This format was actually developed to create graphic output files which could be sent to a Hewlett Packard Plotter. Since Plotters dealt exclusively with structured graphics, it began to be used as an actual file format, directly supported by some applications. *Metaview* supports HP2GL, and *ProPage* is also capable of HP2GL output.

WHERE'S THE COMMON GROUND?

EPS (Encapsulated Postscript) is the lingua franca of DTP packages on all systems, simply because it is easy to handle (the file can just be sent to any Postscript™ output device, with any scaling information necessary), and this is one of the only ways of generating an EPS, apart from using more up to date software like *DrawStudio* or later versions of *Pagestream.*

Although a lot of older software claimed EPS support, it basically only worked if you used an Amiga for all stages of the process, including printing, which wasn't very useful.

Sadly, even *Drawstudio* doesn't include the option to create a PICT or TIFF preview for viewing on other systems. This means that you won't actually be able to see the drawing on screen on a Mac or PC, although it will still print out perfectly.

I have never come across any software which can output files in such a form that they can subsequently be edited on *Adobe Illustrator* or *Freehand* on the Macintosh. Alas, the output of *Metaview*'s HPGL saver seems to be only intelligible to *Metaview*...

Most of the fault here lies with the Mac software which, like all Mac software, refuses to believe that other file formats apart from their own proprietary formats exist, or if they do they want them to work in some strange and unusual Macintosh way.

Unfortunately, as most of the print bureaux in the world still use Mac hardware, the onus seems to be on us to present data in a useable form.

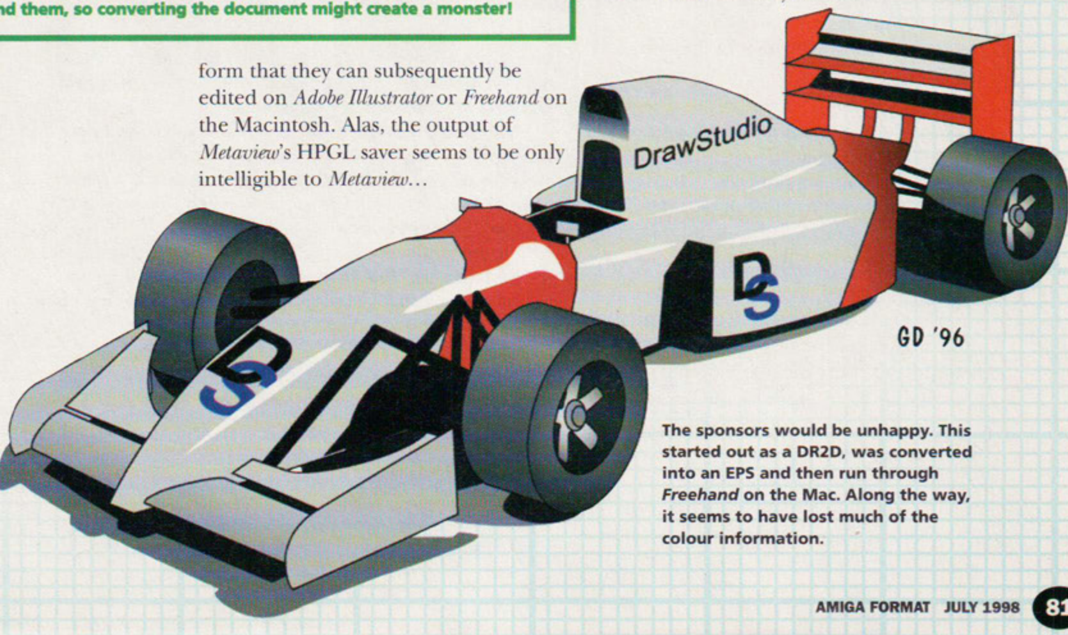
That, rather briefly, covers the topic of structured graphics. We will touch on them again when we come to the instalment on printing.

If there is anything you still want to know, please drop me a line. In the meantime, I would suggest that you get hold of *DrawStudio* (LH Publishing, 01908 370230) if you want to do any structured graphics work.

Oh, and one last tip – when using text, always convert it to a standard bezier object before saving the file as an EPS. If you don't, whatever you use to print the file will require the original font files as well as your EPS.



***DrawStudio* uses many "special" effects for gradient shades and translucency (left). Unfortunately, not many other programs, like *Metaview* (right) understand them, so converting the document might create a monster!**



The sponsors would be unhappy. This started out as a DR2D, was converted into an EPS and then run through *Freehand* on the Mac. Along the way, it seems to have lost much of the colour information.

C for Yourself

Open your windows! John Kennedy has some proper Amiga programming for you at last.

Contents

Missed a tutorial in this series? Call our back issue hotline on 01458 271102 or see page 51.

Now that we are close to writing programs that look like real Amiga programs rather than text-only utilities, you might have some basic questions. How difficult is it to write a program which uses the familiar Amiga user interface? How hard is it to get the Amiga to perform actions such as opening a window, creating a menu or drawing a button? As the programmer, how close to the details do you need to get? Do you need to actually draw the window using graphics commands? Who looks after moving the window and redrawing what is underneath it?

The good news is that the Amiga's Intuition system is all ready and waiting to help you with your program. You only need to describe the kind of objects that you want to appear and the operating system itself will draw them.

Once you have defined a window, the Amiga will draw it and look after moving it, redrawing it and closing it.

> The good news is that the Amiga's Intuition system is all ready and waiting to help you with your program.

That doesn't mean it's easy, just that the Amiga does almost all of the really hard work involved. What is hard for the programmer is the act of describing everything because there is so much to know about. On a practical level, the description consists of a set of values in a structure. The structure is then passed to one of a large number of special functions – the function exists as part of the Amiga's libraries.

You don't have to know how these library functions work but you need to know their names and how they expect to be presented with data – that's why the "ROM Kernel" manuals are so vital.

Your C Compiler also needs to know this, and for this reason you need to have the necessary include files to let your Source Code access the functions.

You also need the library object code for the Linker to combine the various bits and pieces into a program. Yes, it is complicated, but it works and when you get the hang of it, it's not so bad.

OPENING UP

There are some very important things to remember when programming with Intuition. First of all, you must check everything. You can't call a function and expect it to work 100% of the time. You must check that it has done what you hoped and, if not, take evasive action.

Here's an example why. Let's say you want your program to open a window and then write some text into it. Imagine the program was running but for some reason the window didn't open. It could be that you made a mistake in the way the data required for the window was supplied or it could be that there was no memory left for another window.

It doesn't matter why – just assume it didn't open. A badly written program would carry on regardless and go immediately to writing the text. Now the window doesn't exist, so where will the text go? Probably into some random memory location, causing the system to crash, guru and generally not work. This is why every time you attempt something like opening a window you have to check it.

Now, remember those libraries I was talking about? They are the functions that allow your programs to access the Amiga's special features, such as windows. In order for your program to use these functions it needs to know where they are located in the Amiga's memory. However, as the Amiga is a sophisticated multitasking computer, we simply can't predict where the routines will be. Further, different versions of the operating system might move them about, add new functions and so on.

We find where they are by "opening the library". This fixes the functions and gives our program access to them. When we've finished, we have to "close the library". To do this we use two functions that are always known to the system, OpenLibrary and CloseLibrary.

Listing 1

You can see that the name of the library is supplied to the OpenLibrary function. The number is the minimum version number which we'll accept – this will stop the program working on Workbench 1.3 systems.

We then check the IntuitionBase variable, and only if this isn't set to NULL do we do anything else, which includes closing the library. You can't close it if it hasn't been opened after all. The variable will be set to NULL if the library doesn't open.

Opening the window follows a similar pattern. First we declare a variable to point to the window, then we define the window's description data and finally we open it. Here's the code to do all that:

```
struct Library *IntuitionBase;
IntuitionBase = OpenLibrary("intuition.library",37);

        if (IntuitionBase!=NULL)
        {
                // Do what needs doing
                CloseLibrary((struct Library *)IntuitionBase)
        }
```

TAG, YOU'RE IT

You'll see the word "tag" appear in the code that follows. Tags are a way of extending the previous version of the operating system in a way that makes programs backwardly compatible, and basically that's all you really need to know about them.

I should say at this point that a lot of the source code you'll see can be treated purely as a magic recipe, in that you don't need to know exactly what is does. You can copy it, make small changes and it will still work. Later on you can look up the functions and find out what you've actually been doing.

Remember too that the Amiga is

Listing 2

The structure we define called win_tags[ ] contains the various settings necessary to open the window. These include the position (the number of pixels from the left hand side and top of the screen) and its size (the width and height). We also need to tell it to include a close button (so we can stop it) and that the message which a close button generates is dealt with properly.

You should notice how the CloseWindow() function is only called if the window opens properly. What happens if you leave out the CloseWindow() function? Try it for yourself – you'll find that the window simply remains open and you can't close it. The only way to get rid of if is to reboot your machine.

```
struct TagItem win_tags[] = {
        {WA_Left,           20},
        {WA_Top,            20},
        {WA_Width,          200},
        {WA_Height,         150},
        {WA_CloseGadget,    TRUE},
        {WA_IDCMP,          IDCMP_CLOSEWINDOW},
        {TAG_DONE,          NULL},
};


struct Window *win;

win=OpenWindowTagList(NULL,win_tags);
if (win!=NULL)
        {
                CloseWindow(win);
        }
```

Let's put these two sections of code together into one program. As it's a real program, we need to include the main() function (where execution starts) and we must also add the #include statements (highlighted in pink). These tell the C compiler where it can find the names of the functions used in the program. Leave out the includes, and the program won't compile.

You'll see that the window description tags (blue) are defined outside the main() function, although they could be placed inside if you wanted.

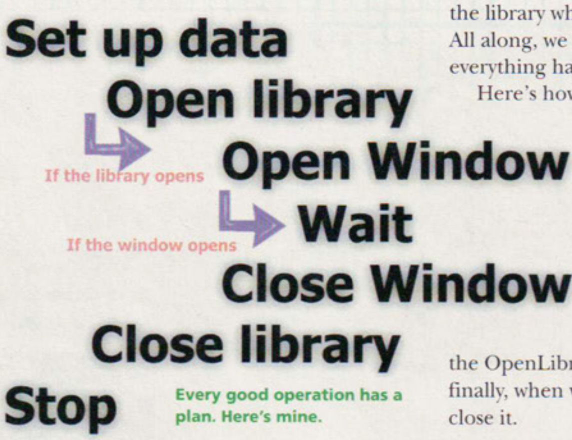
When the library and the window have been opened successfully, the program waits (the yellow area). It waits for a message from Intuition and the only message we have set up is the one from the close button. When that's clicked on, the Wait function stops and control passes onto the next lines. These shut the window, and then the library. Finally we reach the end of main() and the program stops.

multitasking, so when your program is running, the rest of the system is still "ticking over". Your program does not take over the entire Amiga computer and so you must write your software to behave. Think about it – if your program does nothing but open a window with a close button, you don't want the computer constantly checking several thousand times a second to see if the button has been clicked.

This would sap all the computing power from the system, so instead we let the operating system tell us if something has happened, and in the meantime our program can simply doze.

Okay, still with me? Good, now let's plan our program. It's not going to do anything amazing, it's simply going to open a window on the Workbench and then wait for us to close it. However, before we can open the window we need to open up the Intuition library.

We also need to set up the data which describes the window, and finally we need to close both the window and



Every good operation has a plan. Here's mine.

the library when we're finished. All along, we need to check that everything has worked.

Here's how we open the library. The library is called Intuition and we must first define a special variable in order to store its position in memory. Then we open it by using the OpenLibrary command, and finally, when we've finished, we'll close it.

Listing 3

```
#include <exec/types.h>
#include <intuition/intuition.h>
#include <intuition/intuitionbase.h>
#include <intuition/screens.h>

#include <clib/exec_protos.h>
#include <clib/dos_protos.h>
#include <clib/intuition_protos.h>

struct Library *IntuitionBase;

struct TagItem win_tags[] = {
        {WA_Left,           20},
        {WA_Top,            20},
        {WA_Width,          200},
        {WA_Height,         150},
        {WA_CloseGadget, TRUE},
        {WA_IDCMP,          IDCMP_CLOSEWINDOW},
        {TAG_DONE,          NULL},
};

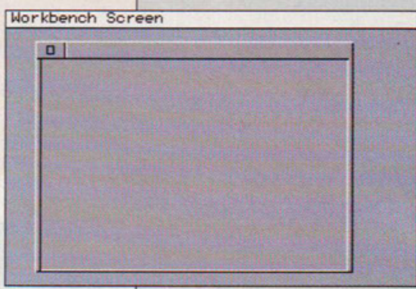
void main()
{
        struct Window *win;

        IntuitionBase = OpenLibrary("intuition.library",37);

        if (IntuitionBase!=NULL)
        {
                win=OpenWindowTagList(NULL,win_tags);
                if (win!=NULL)
                {
                        // Window open!

                        // Wait for a bit
                        WaitPort(win->UserPort);

                        // Close window
                        CloseWindow(win);
                }
        CloseLibrary((struct Library *)IntuitionBase);
        }
}
```



It might not look exciting, but if you get this working then congratulations are in order – you're an Amiga programmer.

It might seem like a lot of effort to open a window but it's essential, I'm afraid.

If you can get this all working, then well done – you're ready to develop Amiga programs.

In order to get it working in your C compiler, you will need to check that you have the various Intuition libraries present (you might need to alter the include# statements slightly) and that the linker utility knows to use the necessary code.

The instructions which came with your compiler should help you. Until next month, good coding!

DOING IT THE EASY WAY

You might be thinking, isn't it a real pain in the nether regions to try to design a user interface in this way? Every time you want to make the window a little larger or move a button you have to wade through all your source code to make the changes. Isn't there a better way?

Yes, thankfully there is. Source code, after all, doesn't have to be written by humans. It's possible to write a program which creates its source code and saves it out to a file. It sounds like a bizarre concept if you've never come across it before, but it works brilliantly. With programs like *GadToolsBox* you can design your user interface using the mouse to drag and position everything, with menu options to set all the tags. Then select Save and the program writes out the source code. You can edit the code if you wish, or include with your program, and the job's done.

This saves weeks of development time, and it's fun too. The program will perform tricks such as creating a function for each button on the screen. When the user clicks on the button it calls this function and all you have to do is insert your own code to perform whatever action is necessary. Wonderful.

Under the Bonnet



Simon Goodwin's advanced Amiga tutorial uncovers drive interfaces.

AFCD28:-In_the_mag-/Under_the_bonnet/



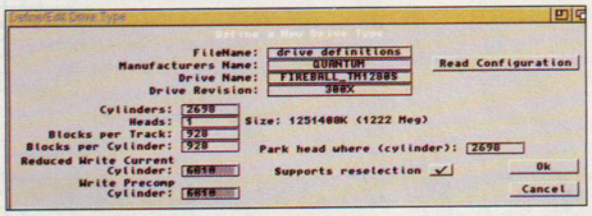
Contents

Modern Amiga hard drives use SCSI or IDE interfaces, derived from minicomputers and IBM micros. SCSI stands for Small Computer System Interface – 'small' originally indicating systems not requiring their own air-conditioned room! IDE is short for 'Integrated Drive Electronics'. There are many differences between these, and variations within the SCSI and IDE 'standards', and in the way in which they communicate with the Amiga.

Simple interfaces use 'polling', with the processor transferring each byte or word. Cheap SCSI and almost all IDE interfaces work this way. It's simple, but it ties up the processor during device access, which hobbles a fast, multi-tasking machine – reading 32-bit words at a megabyte a second, a 68060 could execute up to 300 instructions between one transfer and the next.

That opportunity is wasted if the processor must wait, polling the controller, until the next word arrives.

> A good DMA system leaves almost all the processing time intact, only costing the time to issue commands...



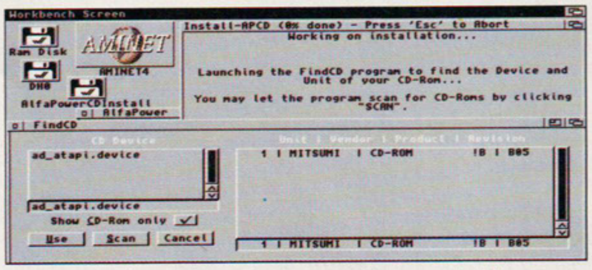
HDToolbox Read Configuration works out the geometry of a drive.

DMA

The 'cure' is Direct Memory Access (DMA) where the controller accesses memory directly while the processor gets on with more interesting work. A good DMA system leaves almost all the processing time intact, only costing the time to issue commands and a slight reduction in effective memory speed

A bad DMA system can actually cripple speed or crash systems unpredictably. Old DMA cards can only access the first 16Mb of system memory, 24-bit Zorro II space, denying them access to fast 32-bit memory.

Find_CD takes the guesswork out of configuring ATAPI drives.



Software updates are vital for reasonable performance with a 24-bit DMA card on a 32-bit system. Commodore's 2091 needs version 7 ROMs, and preferably local 16-bit RAM, which can be used for 24-bit DMA transfers without clobbering chip RAM, or it falls back to polling, at a feeble 30K per second.

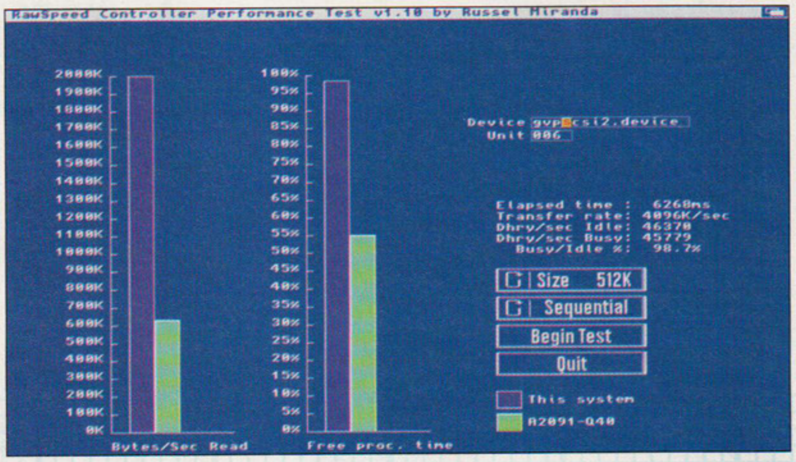
VB2091 boosts speed on 2091 and some GVP cards by moving data through a low memory buffer, then copying it into place. Even 64K is enough to make a big difference, boosting speed to about 800K per second. *RawSpeed* (on the CD) is a good guide to transfer rates and CPU overhead, but truncates its graph at just 2Mb per second, far short of more modern SCSI drives.

Genuine 32-bit DMA interfaces such as FastLane, A4091, or the Warp Engine, Cyberstorm and GVP 4060 controllers are best. You need the last version of Commodore's Bus Terminator chip, BusTer rev. 11, to use Zorro 3 DMA controllers reliably.

IDE

IDE drives work as if they were directly plugged into a PC expansion slot. Old IBM ST-506 drives needed a complicated interface card but IDE eliminated that by building it into the drive itself. The first IDE drives were eight-bit XT models. IDE commands are still eight bits wide, but data transfers chomp 16 bits at a time, over a 40-way cable.

Fast ATA and E-IDE are minor, upward compatible variations. 2.5 inch IDE drives merge power lines into the connector, on a 44-way plug. Adaptor details are on the CD.



RawSpeed tests the COMBINED speed of the drive and processor together.



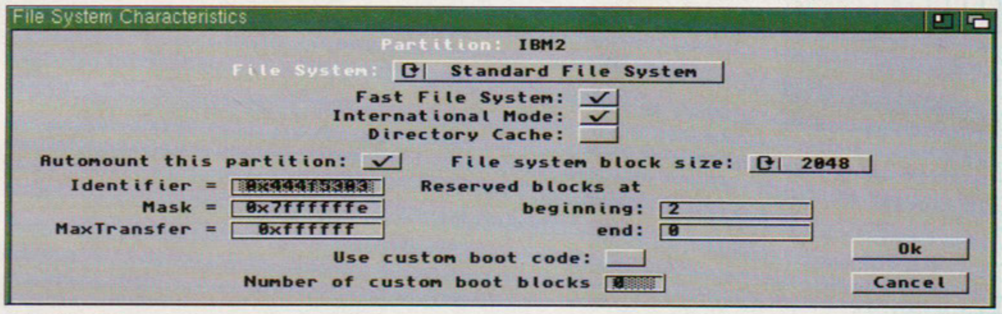
Drive Data

http://w3.teaser.fr/~praynaud/HD/
http://web.idirect.com/~frank/
http://www.quantum.com

You can usually guess what a drive manufacturer's website will be called by adding 'www' and 'com' to it.

(Left) *HDToolbox* sets a Boot priority for each part or 'partition' of a drive.

IDE interfaces need just a couple of cheap chips. They're built into the A600, A1200 and A4000 and can be easily added to other systems. Options include AlfaData for the A500, Tandem and Buddha for Zorro.



HDToolbox has Mask, MaxTransfer and Block Size tuning options.

MASTERS AND SLAVES

Each IDE cable can have two drives. One, the 'master', must control the second, the 'slave', or the combination will not work. Amigas can boot from either. ATAPI CD drives are generally set up as slaves.

There's no configuration standard but most drives have three jumpers which dictate who's in charge. Good drives have the jumper details printed on the case or in the manual, otherwise you should consult the manufacturer or look on the Internet.

Slave drives have a jumper on a pair of pins, often labelled 'SL'. The 'MA' or master jumper is typically connected to indicate that this is a master and that a slave is present. It is left open if it is the only drive, and is therefore the master of itself alone.

Another approach uses an asymmetric cable to distinguish between the master and slave, with plugs distinctly wired for each. The third jumper, often labelled CS, for 'cable select', alerts the drive to this set-up.

Most users can get two drives working on one cable but it's not guaranteed. Jumper combinations vary between manufacturers, and some combinations of drives, even from the same maker, may refuse to co-operate.

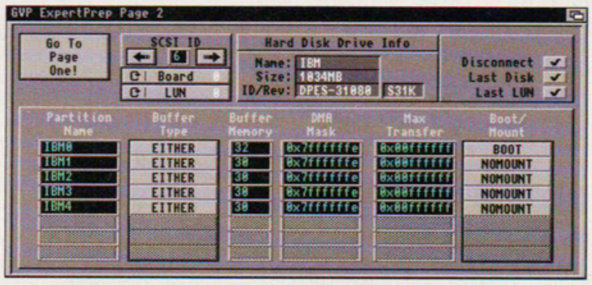
Since IDE is just a set of memory-mapped registers, multiple sets are easy to make, allowing four drives with passive or active IDE splitters, six with CatWeasel+Buddha. However, it's a memory interface so cable length is an issue and buffering and noise can be a problem. Cables shouldn't exceed 18 inches in length – the shorter, the better.

ATAPI

IDE was intended for fixed hard disk drives, lacking commands for scanners, tapes and CD ROMs. After incompatible attempts to bodge CD ROMs onto IDE, PC makers adopted ATAPI – Advanced Technology Attachment Packet Interface, which transfers SCSI commands over IDE, leveraging reliable, compatible SCSI software at both ends of the link.

Oliver Kastl leapt in with Shareware atapi.device code, linking ATAPI drives to Commodore's bogus scsi.device. These permit AlfaData, Buddha, Commodore and Tandem ports to control cheap ATAPI CD ROMs.

You can now get removable IDE drives from SyQuest and Iomega, and even ATAPI CD recorders, although these push the limits of the interface. SCSI is preferable and you may have to burn CDs in single-speed mode to ensure glitch-free operation over IDE.



ExpertPrep sets Mask and MaxTransfer for GVPs 4060 accelerator.

DIVISIVE DEVICES

Commodore adopted IDE in order to cut costs after championing SCSI on the 2091 and A3000. Their patched 'scsi.device' translates SCSI commands into IDE equivalents so programs designed for SCSI still work. That's why the IDE interface control code is still called 'scsi.device'.

If you plug in a real SCSI adaptor it will appear as '2nd.scsi.device'. My A4091 appears as '3rd.scsi.device', as the bugged phase 5 CyberSCSI answers to both 'cybscsi.device' and '2nd.scsi.device'.

Rivals include 'empscsi.device' and squirrelscsi.device', found in DEVS: or the interface's own ROM. Names are case-sensitive and they must be specified exactly or they will not be recognised.

HDTOOLBOX

Most SCSI boards come with their own formatting software but you can use a standard command like *HDToolbox* gvpscsi.device, or specify the desired name after SCSI_DEVICE_NAME= in *HDToolbox* icon tooltypes. There's no need to specify drive dimensions (number of Heads, Tracks and Cylinders) as *HDToolbox* can 'Read Configuration' for you.

HDToolbox does not support partitions of more than 2Gb as it uses 32-bit signed arithmetic internally. It copes with up to 4Gb of space on each 'unit' or drive, but disconcertingly shows space beyond 2Gb as a negative value!

TD64, on Aminet and Amiga Inc's web page, removes the 4Gb limit but upsets some adaptors, *DiskSalv*, some RADs and cache and backup programs.

IDE drives derived various other limitations from PCs. For example, some will get confused if you ask them for lots of data at once. MS-DOS reads just one sector at a time and even after this was fixed, PC DMA hardware was limited to 64K transfers, so drives were rarely tested with longer accesses.

Amigas have no such limits but may show drive faults that PCs ignore. *HDToolbox* can restrict MaxTransfer, the maximum transfer size, to placate dumb drives. Lower MaxTransfer values reduce drive speed but may improve system responsiveness. Good drives accept 0xFFFFFF, up to 16 Mb. 0xFFE0 is safest for old PC drives.

The other hexadecimal option in *HDToolbox* is 'Mask'. This determines the addresses which the controller can access directly. Typical values are 0x7FFFFFFE – 32 bits with the first and last reset – for a 32-bit controller, and 0xFFFFFE for 24-bit Zorro 2 DMA controllers. The final zero bit confines data to even word boundaries.

READ ON

***AFCD28* includes DIY SCSI and IDE adaptor designs, software patches, speed testers, drive specifications and a mine of other useful information in the 'Under The Bonnet' drawer. Next month I'll explain more about SCSI.**





MailBag

Send your letters to: Letters To The Editor • Amiga Format • 30 Monmouth Street • Bath • Somerset • BA1 2BW or email: amformat@futurenet.co.uk – putting 'Mailbag' in the subject line.

SPARE US	SEND US
• Complaints about lack of game reviews	Your games •
• Requests for various bits of old software and games	Reader Ads, which is a whole section devoted to this sort of request •
• Useless nonsense	Useful nonsense •
• Requests for AMOS manuals	A new version of AMOS •
• Requests from cheapskate Iranians	Gifts from wealthy Arabs •
• Spam	Tofu •
• Amigas you have seen on TV	Amigas you have seen making TV •

FUTURE AMIGA?

The fourth anniversary since the downfall of Commodore is now upon us. A lot has happened over a relatively short period that has had quite an impact upon the Amiga community as a whole. There is no doubt about it, many of us will have felt quite fatigued and many more will have endured the hopeless feeling of abandonment which has been ruthlessly placed upon us by the many software developers, especially within the games market.

During the agonising legal wrangle involving Commodore, Chapter 11, and a certain Bahamian court, droves of individuals, including myself, couldn't help but notice the way in which shop shelves dedicated to the Amiga were slowly shrinking and were being taken over by the newer and, I must admit, rather interesting consoles which were appearing overnight. I fell victim to the Panasonic 3D0 Interactive Multiplayer FZ10. Yes, I do love that name.

During this time, the software industry in general began to dismiss the Amiga as a games machine and started to move towards the newer consoles and the not so new IBM compatibles. With this move, a past bane of the Amiga followed, piracy, and hit the newer markets like a nuclear bomb.

The Amiga was suddenly a free spirit and was being held within the caring arms of people who truly loved the platform, which in this case were the very same people who read this magazine.

A lot has happened since Commodore were producing Amigas, but what will the future hold?

The people who thought about the Amiga as merely an entertainment system moved on and invested in the Atari Jaguar and the Sega Saturn, which is currently sitting on a very uncomfortable tightrope. What we witnessed was a major group of people who held on tight to their beloved machine, simply because it was unique, the ultimate non-conformist and most importantly because they had faith in it.

These people allowed the Amiga to survive and assisted the platform's development into the mature and elegant device which it is now.

We are now presented with a serious computer which can be used to tackle serious challenges, while the high-end software scene has suddenly exploded with applications such as *Real 3D v3* and *Cinema 4D*, and not forgetting the wonderfully cheap *DPaint V* for under £20, an irresistible bargain.

Of course, a lot still needs to be done but the Amiga is now under development by several manufacturers with a growing user base, especially within Asia, and hopefully a future advertising campaign. This does not need to be huge but would be helpful – maybe a collection of magazine ads and leaflets could be exploited.

One event would truly be great though – an Amiga operating system which is fully Unix compliant and even greater if it were to be Irix with a Workbench front end. Just imagine it, *Softimage*, *Amazon Paint* and *Netscape Communicator*, all multi-tasking from within Workbench.

Paul McDermott
Middlesbrough

Check out whether your future vision of the Amiga matches up with that of its owners by reading this month's news pages…



Check out Sabrina Online at http://www.coax.net/people/erics/

ROOM FOR EXPANSION

I have been looking through my latest copy of *Amiga Format* (April 98, *AF109*) and I was shocked to see that from 116 pages, you are now 108 pages. Although your mag and CDs are very good, I think you should expand, page wise. But with what?

I thought that since we have a Reader Games section, Seriously Amiga could start a Reader Apps section where readers can send in utilities, just like Reader Games.

Also, for Screenplay, what about a Long Term Games Review section, where readers send in reviews of games, just like Long Term Serious Reviews? Anyway, keep up the seriously good work at *AF*.

Lastly, I was wondering if you knew of any good, cheap/free C compilers? *Dice 3.15 Freeware* doesn't support floating point values! On the subject, I know that Haage & Partner and HiSoft have cheaper versions of their C environments, but maybe an even cheaper version would bring more sales to the respective companies from C programmers on a budget.

Long live the Amiga! Oh, Amiga Inc. please, please harp on about the Amiga being Millennium proof and make sure the public know.

Nick Lamburn
Braunton

Just to make it clear, the size of the magazine is not actually determined by how much we can think of to put into it. As you might imagine, we could probably fill a magazine twice the size if we had the resources in terms of staff and equipment. What largely affects the actual size of the magazine is the number of advertisements, as the revenue from advertising goes a long way towards paying for the printing costs.

In fact, in real terms the magazine is not that much smaller than it ever was. In terms of editorial pages, as opposed to adverts, the magazine is only half a dozen pages smaller than it was two years ago. Please continue to write in suggesting things you would like to see in the mag, but don't assume that it's smaller because we have run out of things to write about.

In answer to your C query, DICE *is a very good implementation of C, and more remarkable for the fact that it is Freeware. If you are that concerned about non-integer arithmetic, you might like to check out* GNUc*, the freely distributable UNIX-based compiler (available on the Geek Gadgets CDs). However, you will probably still want a commercial compiler to get all the standard CBM include files.*

AMIGA FORMAT?

I am writing to ask if you are messing about with the format of the magazine CD-ROMs. I changed last year from the floppy disk version of the magazine to the CD-ROM version and CDs 16 to 22 worked perfectly, with no problems.

AFCD23 did not work and my Amiga would not even recognise that there was a CD present within the drive. The disk did work because I tried it on my CD32 and that would access the disk. When I received *AFCD24* I tried it on my system and it worked. I have recently received *AFCD25* and it does not work on my Amiga but it does work on my CD32 just like *AFCD23* did.

The problem does not appear to be the CD-ROM drive or the software because I can access other Amiga and PC CD-ROMs with no problems.

Kevin East
Croydon

There has been no change in the actual format of the Amiga Format *CDs, but some of them have been slightly more compliant to the ISO9660 standard than others. When the ISO standard for CD filesystems was invented, it was decided, amongst other things, that directories should be limited to eight levels deep, to save on the requirement for large hash-chain caches for the directory listings. There is also a limit to the number of files which can be contained in one directory. While most drives and CD filesystems can happily work beyond this limit, it has become apparent that one mechanism in use with the Amiga (the Sanyo 2X drive) doesn't like it at all. We have now made changes to the way the CD is manufactured to prevent this from being a problem again.*

You may ask why we bothered to bend the rules in the first place. Simply, it was to make it easier to arrange the files on the CD in such a way that people can find them. Because there are so many files on our CD, it would be a serious problem.

Another original "requirement" of the ISO standard is that filenames should be restricted to eight characters with a three character suffix (like the old PC filename format). I hope you don't suggest that we should stick to this rule (for a start, half of the software would no longer work!)



New *AFCDs* should now be easier to use, it should be easier to locate what you want on them and they're fully ISO standard compliant.

ADDED VALUE

I have owned Amigas since 1985 when I paid £800 for an A1000. I am now looking to expand my current system and I have found that £150 gets you 5 Zorro II, ISA and PCI. A graphics card is £150 on top of that (for a low spec card) and 16-bit sound cards will cost you about another £170.

Can you explain why Amiga sound cards cost £160 or more when an AWE 32 is around £50? Can you explain why a dated spec Amiga graphics card costs £150 when a state of the art 4Mb graphics card and accelerator doesn't cost anywhere near this for the PC?

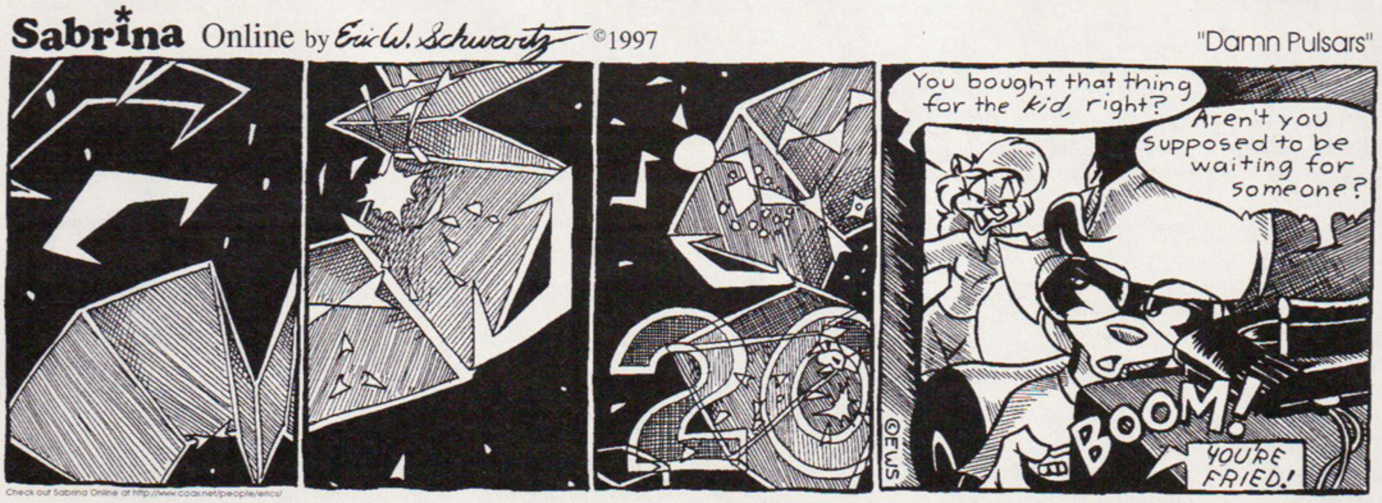
I have spent over £2,000 on my system over about three years. To spend another £500 just to get the spec of the lowest of low PC is absurd. And don't say that a PC bought three years ago would cost more because it wouldn't - £2,500 would buy a meaty PC even now.

My point is this – if the Amiga is to make an impression again it must utilise cheap, powerful PC components like floppy drives, graphics and sound cards.

This would take nothing away from the Amiga's unique Operating System and base of users, which is what makes the Amiga an Amiga.

Mark Sudlow
Winsford

Continued overleaf ➡



Check out Sabrina Online at http://www.coax.net/people/erics/

I think there are two very interesting strands to this argument. Firstly, you are correct that a lot of Amiga hardware is more expensive that its PC equivalent, simply because of the volumes sold and, to a certain extent, the greater degree of competition in the PC market. However, if you had bought, say, a Picasso II or a GVP Spectrum several years ago for your Amiga, you could still be happily using it and expect it to be supported by the latest software (which it would be).

The same could not be said of a PC graphics card, which again works in favour of lower prices for PC hardware – the manufacturers don't need such a high margin because they know you will probably be buying their latest card in a year or so and chucking the old one away.

You fail to say what you have actually spent £2,000 on, so I can't really see where you feel let down. £2,500 would buy a decent PC system, but I feel bound to point out that if you had spent this amount of money on a PC in 1988 it would now be gathering dust somewhere because no new software would run on it. Even if it was a model from three years ago, you would have had to upgrade quite a bit to keep up to date.

It would be a good idea if hardware manufacturers could create one set of hardware for all platforms, and this may yet come to pass, but you may not find it much cheaper in the long run.

I SAY I SAY

Imagine this conversation between two friends:
"You've got an Amiga? That died out years ago!"
"It's coming back though. It's got *Doom* and *Myst*, and *Quake* and *Napalm* are coming out too."
"*Napalm*? Never heard of it."
"It's a C&C clone."
"Huh, nothing matches up to the real thing."
(PC guy goes off quite impressed.)
Now imagine this:
"You've got an Amiga? That died out years ago!"
"It's coming back though. It's got *Doom* and *Myst*, and *Quake* and *C&C* are coming out too."
"Wow, what else?"
"Well..."
(Amiga guy tells him how great the Amiga is. PC guy goes off even more impressed than the last one.)

What I'm saying is that although I'm well prepared to believe that *Napalm* will be as good, if not better, than C&C, something that has been made just for the Amiga won't sound as impressive to a PC owner as something converted for the Amiga.

I think the more PC games the Amiga has, the more proof there is that the Amiga is quite capable of running PC games. Also, why don't we get some arcade machines converted?

Sam Blanning
Welney




Napalm is a C&C clone, but one that should actually be better than its predecessor – and it's Amiga exclusive.

There may be something in what you say, but I for one am very pleased that clickBoom have not gone for a C&C port. For one thing, it makes it easier for them to take advantage of the Amiga's particular strengths in terms of game design, instead of having to emulate the PC way of doing things.

Secondly, it means that instead of being contractually bound to produce an exact replica of C&C, they can actually fix some of the problems with the game and, shock, make it better than C&C – you never know, maybe someone will approach them to port it to the PC... Thirdly, it means that clickBoom will probably make more money out of the project, which is a good thing because that helps them to continue developing for the Amiga.

At the end of the day, I think I would rather have a good game that's great to play than something which might impress some PC owners.

SCHOOL'S IN

I have had an idea of how to get Amigas into the education system. Gateway 2000 should produce about 100 Amigas with PPC chips to send to schools. Each school would keep the computer for about six weeks. After this, they would send the Amiga back to Gateway, who would then send it on to another school.

If the schools liked the Amigas then they would consider buying them instead of PCs.

Leon Brown
Liverpool

An interesting idea. We should know more about Amiga Inc.'s plans for marketing the platform before our news section goes to press, so check it out now...

KEY MATTERS

Having searched the country far and wide for the Chroma-key unit that was said to be released for the Amitec Fusion genlock on the October after its release, I decided to try the *Amiga Format* helpline.

The person I spoke to seemed to imply that my inquiry was about such an old piece of b-standard equipment that I was not worth talking to. It is dull attitudes of this kind that throughout history have banished valuable tools such as the Amiga to the pit of unfashionable non-being.

As a practising artist, may I please point out to anyone it may concern that technology will never dictate aesthetic dominance. Perhaps the finest positive thing any discerning creator can get from this is lovely, cheap goods.

This is, however, only until, as with analogue music equipment, it becomes fashionable again.

David Watson
Newport

I don't think anyone here would be unwilling to speak to you just because you were after some old hardware — it is more likely that they merely couldn't help you as the unit you asked about doesn't exist.

As far as I remember, the only Chroma-key unit ever released in the UK was the Roctec one. Sadly this is no longer manufactured, but perhaps if you placed a Reader Ad someone could help you out.

Are our tutorials guilty of being too simple or of being too complicated for beginners? Let us know what you think.



IN TOO DEEP

Thanks for a great mag, but I have a few grievances. The Under the Bonnet series is a brilliant idea, but it doesn't really go into enough depth. All Amiga magazines are guilty of glossing over the basics as though everyone is a complete Amiga genius already! I've had to learn the hard way how an Amiga works and why it sometimes doesn't.

The point is that everyone that owns your mag hasn't owned an Amiga since the days of Commodore. Some of us are quite new and still quite ignorant.

Ok, so the clever ones are going to say, "Oh no, do we have to go through all this again?" Well no, you don't, just don't read it if you already know it.

Everything I know I've found out for myself or read about in your mags. I've made a lot of mistakes but I've recovered from them all and not because I'm clever, but because the Amiga is such an easy machine to use.

Anyway, keep up the good work but bear in mind that with Amiga Inc. trying to sell as many new Amigas as possible, there are always going to be some new Amigans out here that just don't quite understand what you are trying to say.

Why not employ a new owner just to check the "user friendliness" of your mag? I'd be glad to help out!

Finally, I'd just like to say thanks for *UFO*. I've been trying to get my CD32 version to work on my hard drive for ages. Also, thanks for the imminent *F1GP*. I've just bought it. Oh well, you win some, you lose some.

Richard Friend
Watford

I'm not really sure whether you are saying the series is too technical or not technical enough. We have run plenty of series' for beginners in the magazine, and not all in the dim and distant past.

Last year we had a beginner's tutorial and I got loads of letters from people complaining that they knew this stuff already

(and quite a few thanking us). Now we run a more technical series and this is the result.

I'm sorry if you feel unable to follow it, although you don't give any examples of things which you don't understand or in what way things could be made clearer.

Unfortunately, fooling around with Workbench, its libraries and the startup-sequence is something that it is better not to meddle with if you don't know at least a little about what you are doing.

I think the series is actually easy for someone to follow who has used an Amiga for a while, or has followed one of our many guides for beginners. Unfortunately, with the type of topics covered here, it is impossible to give step by step walkthrough instructions because so much depends on the specifics of the individual machine you are using.

WATCH OUT

ShopWatch is a good idea. Shops are handy places. You can see the goods, ask questions about them, meet people who know more about them than you do.

You can take things back if they don't work and sort things out with flesh and blood people. A guide to shops we didn't know about is just what Amigans need.

That's why, gob-smacked by seeing a local address listed, I went there as soon as possible, trembling like a kid being taken to the grotto. There is no shop.

It's only an accommodation address. It's as local as any other mail-order operation. You simply raised my hopes and wasted my time.

If you're going to include non-shops in a feature about shops, please signal the fact in some way and mark the entries accordingly. You could also incorporate more information about actual shops, such as eccentric opening hours and/or days.

Three of the entries give no indication of the scope of their service. Then, confusingly, First Computer is described as a mail-order company. So it is, but it is also a real shop whose long-running ad in *AF* includes a handy map of how to get there.

Finally, what happened to this idea the first time you had it? I seem to remember the superfluous little lady from over a year ago, decorating an item that promised monthly reports of Amiga retailers all over the place. I don't recall any subsequent reports.

Derek O'Reilly
London



ShopWatch relies on you, our readers, to give us up to date, accurate information.

Yes, sorry about that. We went through the list of shops we had accumulated, rang them all and checked the details. I can't really say whether this particular shop slipped through the net or simply gave us duff information, but it has been removed from our database.

Unfortunately it is not within our means, in terms purely of the time taken, to visit all of these shops and check them out in person. That is where we rely on you, our readers, to help out.

Frankly, we have been underwhelmed by the response from the UK. We have had more reports of Amiga shops sent in from our overseas readers than from the great majority of you who live in the UK. This is even harder to believe because there are a lot more Amiga-supporting shops in the UK than virtually anywhere else.

I suppose the lesson here is that you, the readers, are in the best position to help yourselves. If you have a local shop that supports the Amiga, by writing in and telling us about it you are not only helping other users but yourself as well.

The more Amiga customers that shop gets, the more likely it is that they will continue to support your platform.

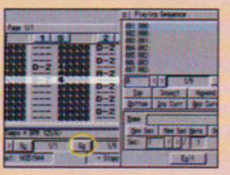
And thank you Derek for getting in touch. You may have had a negative experience, but at least it will prevent other people from suffering.

MODS FOR ROCKERS

I need to know how I can get the best music module making program for the Amiga. Don't worry, I'm not going to annoy you by sending lots of mods to your CD (you can't use them, etc, etc, etc!) but I want to make modules to use in animations that I make with *Amos Pro*, which I then put onto video. All I've got is *Noise Tracker*, an absolutely ancient and poor Module making program that you gave away on a coverdisk all those years ago.

I've noticed that I can pick up *OctaMED Sound Studio* from Epic for about £3, but does this make mods that *Amos Pro* can handle?

Stuart MacDonald
Swalecliffe



There are some great music modules – just don't send us your tunes.

SoundStudio should be able to save out the MOD type you require (I don't have a copy of AMOS Pro to test it on), as long as you stick to normal 4-channel sound.

I'm glad to hear you won't be sending them in!

PASS THE DUTCHIE

In reference to the letter by Remco Komduur, Holland, on Dutch spell checkers. Softlogik are working on such a thing right now with help from a Dutch user of *PageStream*. See the dialogue in the excellent *PageStream* mailing list (email info@softlogik.com for instructions on joining the mailing list).

***PageStream 3.3* is the most capable DTP program I have used, regardless of the computer running it – it really is.**

Bill Kean



Thanks for the update, I hope you agree with our review on page 60.

The excellent PageStream 3.3, soon to be available in Dutch.

Snippets:

Congratulations to Weird Science for the speed at which *OxyPatcher* was delivered to me. Companies like this, along with Power Computing and Eyetech are giving our beloved machine a new lease of life. People, do us all a favour and support them.

Darren J. Horner
Newcastle-Upon-Tyne

I have found your magazine very helpful and informative. It makes a change to read a computer magazine which isn't just trying to sell a product and doesn't blather on about the superiority of its particular platform over others.

Stephen Good
London

Working within the electronics industry on video and CD test equipment, I am lucky (?) enough to come into contact with Windows NT 4. The IT engineer who is employed here spends many a "happy hour" resurrecting dead PCs (you know, £1,000 plus WinTel things) from that far off land called Crash.

I've enclosed some snippets from various electronic trade magazines. It just shows that even people who work with Windows/Intel machines don't think much of them – even our software guys!

Steve Bromley
Oswestry



Competition result...

"It was asking for trouble upgrading to NT in mid-Atlantic."

CONGRATULATIONS to Ian Williams from Pelcombe Ltd, Harwich, Essex. A bottle of champagne is on its way.



...een hammered"

EVER LOST IMPORTANT data files on a PC? Silly question, so here are a few suggested Haiku error messages intended to create a more tranquil approach to the problem of crashing PCs.

Windows NT crashed.
I am the Blue Screen of Death.
No one hears your screams.

The code was willing,
It considered your request,
But the chips were weak.

Everything is gone;
Your life's work is destroyed.
Squeeze trigger (yes/no)?

Three things are certain:
Death, taxes, and lost data.
Guess which has occurred.

Laughing at other people's misfortune is cruel, but when it's PC users... tee hee!



Reader Ads

Whatever you want for your Amiga, this is the place to look for the best deals and the best contacts around.

FOR SALE

A600 must go. Comes with Workbench 2.05, 1Mb fast RAM. VGC, only £60. ☎ Clive on 01726 822061 after 7.30pm weekdays, any time at weekends.

A1200, 6Mb RAM, 64Mb HD, quad speed CD-ROM, Citizen 1200+ printer, 1084S monitor, WB3, mouse, joystick, manuals, games, magazines, utilities, £400. ☎ 01252 725153.

28.8K modem (boxed and unused), £20. Net and Web software pack, £5. External floppy drive, £15. ☎ Andy 01489 573422 (pm only).

Amiga Competition Pro joypad, £5. Amiga Format cover CDs, 1-21, none missing, £25. Amiga 1200 power supply, £10. Roctec external floppy drive, £20. ☎ Brian 01384 860358.

A1200, 18Mb RAM, 1Gb HD, CD-ROM, three floppy drives, 200W power supply, hand scanner, trackball, mouse, colour printer, Mini Office, Pen Pal, new monitor, Microvitec 14", £550 ono. ☎ 01202 537760.

A1200, 200Mb HD, Computer Combat pack, Microvitec 1438 monitor, stereo speakers, all manuals and instructions, tutorial video and books. All hardly used and in excellent condition. £250 the lot. No offers. ☎ 0191 2962888.

CD32, complete with box containing one Competition Pro control pad, one controller, PSU, all leads, nine games, five demos and seven magazines. Mint condition, all for £200. ☎ 01264 354414.

Amiga CD32 with Network CD 1 and CD2 plus other software and games, £90 ono. ☎ 0181 7694997.

CD32, Oscar, Diggers, The Chaos Engine, Super Stardust, Microcosm, serial and sound leads, joypad, network CD, £100, COD. ☎ Bruce 01592 655953.

33MHz FPU, £20. Citizen Swift colour printer and Wordworth 2, £50. Big Red Adventure CD, £15, Wordworth 2, £5, Civilization AGA, £8. ☎ Stuart 0181 9305753.

A1200, 6Mb RAM, 170Mb hard disk, manual, games, lots of software installed including Deluxe Paint V, good condition, £220. 01460 2221264.

Untouchables, E-Motion, Shadow of the Beast II, Nightbreed, Stormlord, Blasteroids, Xenon II, Alien Breed SE, Welltris, Populous, £3 each. AB Tower Assault, Syndicate, Chaos Engine, AB3D, Cannon Fodder, Uridium 2, Clockwiser, Mean Arenas, ABII, £7.50 each. ☎ 01709 814296.

Onescapee £20, Lemmings, Seek and Destroy, Crystal Kingdom Dizzy, Microcosm CD32, Heimdall CD32, £5 each. Curse of Enchantia, SWOS, Legends, Knights of the Sky, £8 each. Dune 2, £10. ☎ 0161 3049471.

Motorola data/fax modem 28.8, brand new, genuine reason for sale, £50, no offers. Everything included. ☎ or fax Peter 01502 589376.

Quantum 100Mb SCSI hard drive, £40 ono. ☎ 0181 7694997.

Power 6x speed CD-ROM with Squirrel and software, £70. Wizard power box, 250W, £30. ☎ 0181 7511549 or 0836 261139.

Games, all boxed, £6 and under (some free): Dune 2, Harlequin, Gloom, Monkey Island 2 plus many others. Send SAE for list. Lee Martin, 5 Queens Road, Keynsham, Bristol, BS31 2NE.

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A2000 (2 disk drives) and manuals, joystick, mouse and over 500 disks full of software (Games, PD, Productivity, etc). Immaculate condition, £150. ☎ Jason 01634 723351 or email J.Flood@BTinternet.com.

A2000 HD £100, A600 HD £70, Citizen Swift 240C £75, 1Gb SCSI II HD £80, new 2Gb and 3Gb HDs £130 and £160 respectively, Power double floppy £45, four SCSI int CD-ROM £40, 2 mono printers £20 each. ☎ Tim 01983 200383.

Microvitec series 13 autoscan monitor and Screenbeat 3 speakers, £85. 1.76Mb internal XL drive, £55. Internal power supply for Amiga 4000, £20. Amiga 4000 keyboard, £5. ☎ 0151 3427370.

Original boxed games, £2 to £7 or offers considered. Phone for list. All boxed with disks and instructions. Titles vary from old and new. ☎ Paul 01947 606349.

Blizzard 1230 IV 50MHz with SCSI interface, £100. NEC internal SCSI CD-ROM drive, 3 speed with power supply and all cables. Boxed, £70. Selling due to upgrade. ☎ Olly 01384 863810 or 0860 385011.

A1200, 250Mb HD, 68030 50MHz accelerator board, 8Mb RAM, Workbench 3.0, Wordworth 5, DOpus, Deluxe Paint, Turbocalc, Datastore, lots of games, children's educational discs and lots more. Excellent condition. Bargain, £300. ☎ 0151 3555232.

A1200 '030 50MHz, 18Mb RAM, 2x CD-ROM colour monitor, external floppy, 120Mb HD, Canon BJ10SX printer with auto sheet feeder, Scala 300, Wordworth 6 plus other software and magazines, £600. ☎ Rob 01206 661492.

A600, 2Mb RAM, Workbench, external disk drive, Citizen 1200+ printer, mouse, joysticks, Wordworth 2, £80. Additional games £5 ono. ☎ 01253 728650.

Squirrel interface as new, £30. Games: Hired Guns, Civilization, Monkey Island 2 (no manual), Sim Ant, Sim Earth, Sim Life, A-Train, Settlers, Syndicate, Superfrog, Liberation. Disks, manuals, gwo, £5 each. ☎ James 01425 9815 after 5pm.

MB1230XA 50MHz accelerator, FPU, MMU, fan, 8Mb SIMM, £100. Superb with Lightwave, £50 and Imagine 5, £40. Various games, £10. ☎ 01405 860798 after 6pm.

Magazines. 160 mags, 120 disks. AF1-48 but missing 44 and 47. Also ST/Amiga, A/Computing, CU Amiga, Y/Amiga, AUI, A/World. £40, buyer collects. Bromley/Croydon area. ☎ Ken 0181 7778666.

Amiga 600 with 1Mb RAM upgrade and printer with original disks, £100. Will swap for A1200. ☎ 01243 552913. Please leave a message.

Floppy disk drive and software going cheap. ☎ 01403 270164 and ask for Ben.

Citizen Swift 200 colour printer with Print Manager and Wordworth 2, £50. Greyscale hand scanner, £35. Big Red Adventure CD, £15. Civilization, £10. ☎ Stuart 0181 9305753/0532.

A1200 standard, with 810Mb hard disk, brand new 28.8 modem, Commodore 1942 monitor, loads of software and books, first £300 secures. Boxes for everything. Canon BJC4200, extra £150. ☎ Peter 01502 589376.

A4000 daughter board, £5. Oktagon 2Mb RAM, £5. ☎ or fax Mal Harnden 01780 784054 after 6pm.

A500 software: DPaint 3, Photon Paint 2, Fantavision, Kindwords, Outrun, Hacker 2, Backlash, Air Rally, Goldrunner, Starglider. All originals, boxed with manuals, as new. £50 the lot, buyer collects. ☎ Ken 0181 7778666.

USER GROUPS

New user group starting up in Bodmin, Newquay, St. Austell and Truro. ☎ Clive on 01726 822061 after 7.30pm weekdays, any time at weekends.

XCAD users group want to attract as many XCAD users as possible. Interested in joining and receiving the "XCAD User" newsletter and tutorials? ☎ Tony 01662 250320 after 6pm.

PERSONAL

Contacts wanted for swapping tips and ideas and games. Contact Mr. Garry Emery, 3 Scott Avenue, St. Budeaux, Plymouth, Devon, PL5 1HQ or ☎ 01752 361254.

A programmer from Egypt needs friends sharing AMOS and Blitz Basic programming. Contact Maher Fahmy Farag, Al Thawra Street, 22718, Al Behira, Egypt.

WANTED

Championship Manager 93 with update data disk for 94 and Championship Manager Italia for the A600. Email shiels@hotmail.com.

Leisure Suit Larry 5, King's Quest 6, Legend of Kyrandia and Simon the Sorceror 2. Miss Janet Rimmer, 139 Milton Street, Southport, Merseyside, PR9 7AP.

I'm looking for Reunion and also Robinsons Requiem for my A1200. Anyone got it? Must be virus free. ☎ 01642 465586 (after 6pm).

Scroller 2 titler. Reasonable price paid. ☎ 01636 613042.

V-Lab motion video card and Toccatto sound card for A4000. Budda card for the A4000, or similar to make a 32 speed IDE CD-ROM work. Email Scy@scysoft.demon.co.uk or ☎ 01189 455009.

Coverdisks and magazines – Amiga Computing, Amiga Format, Amiga Shopper, AUI and CU Amiga. Will pay handsomely. ☎ Clive on 01726 822061 after 7.30pm weekdays, any time at weekends.

I'm looking for a multisync monitor and an accelerator card with RAM for my A1200. ☎ 01424 442177 and ask for Darren.

Full versions of Pro Gamble v2 and Forecaster v3 horse racing predictors. 01282 779156 with your price. Please be reasonable as out of work and very limited budget. ☎ 01282 779156.

A520 modulator and Y cable needed urgently for A500+. Will also pay postage and packaging. ☎ 01389 763803 after 4pm.

Toccata sound card. Must be working and I can collect. Cash waiting. ☎ Alex 0860 895906.

Hired Guns and Pirates. Write with price wanted. P. Johnson, 46 Topfield House, Druids Lane, Druids Heath, Birmingham, BI4 5QU.

Alien 3 full game, Fire and Ice, Frontier Elite, boxed or not but must be complete. Also, does anyone know if it's possible to cheat on Theme Park? ☎ Leo Hancock 01963 350397.

'040 or '060 accelerator card for A1500/2000. ☎ Jonathan 01727 768336 after 4pm.

Old games wanted! I'm looking for SWIV and Celtic Legends (boxed originals only please) on disk for my born-again A500+. Also interested in CD32 games. ☎ Aidan 0131 4439722 (evenings).

Battle of Austerlitz, Napoleonic wargame simulation or similar programs. ☎ Martin 01708 709489.

Desperately seeking a genlock to use with an Amiga 1200 and Apollo '040 accelerator. ☎ Jim Gowan 0181 4733376.

A1200 motherboard required since my PCMCIA broke. One of the later revisions preferred and possibly with OS 3.1 ROMs fitted. ☎ David 01904 624637 (after 4pm or anytime at weekends).

AmiFileSafe Pro wanted. I have the user version. Will pay or swap. Please help. Or does anyone know where to get the upgrade to AmiFileSafe Pro? ☎ 01744 733984 and ask for Les.

CD32 games: UFO, Body Blows, Sub 206S, Jetstrike. ☎ Gary 0121 3523017 between 9-12, Monday to Friday.

Will anyone swap a fully working A1200 accelerator or RAM card (8Mb). Must be PCMCIA compatible for A600 accelerator, '030 4Mb. VGC. Ross Whiteford, Cordon , Mains, Abernethy, Perth, PH2 9LN.

Help! Need 64-pin SIMMS for GVP '030 board. Send details to Anthony Page, 126 Kingscote, Yate, Bristol, BS37 8YG.

Canon PJ1080A colour inkjet printer driver needed for A1200, WB 3.0. Will pay. ☎ Nigel 01535 644683.

Blizzard 1230 50MHz or Apollo 1240 33MHz accelerator, with or without FPU/RAM. Cash waiting. ☎ 01502 511513 (Neil) or write to: Neil Potter, 2 St. Margarets Plain, Lowestoft, Suffolk, NR32 1SY. Will collect or pay postage, UK mainland only.

Scala manual or complete commercial Amiga Scala program with manual urgently needed. Email jack.ackroyd@btinternet.com or ☎ Ron 01189 442228.

Amiga original software wanted (not budget versions): Street Fighter (Go!), Leonardo (Starbyte), Nebulus (Hewson), Nebulus II (21st Century), Sword of Sodan (Discovery), Stardust (Bloodhouse). ☎ Darren 01865 777685 after 8pm.

The Gallery

ON THIS MONTH'S CD

AFCD28:-ReaderStuff-/-Gallery-

Ben Vost presents the latest batch of top notch artwork from the Amiga community.



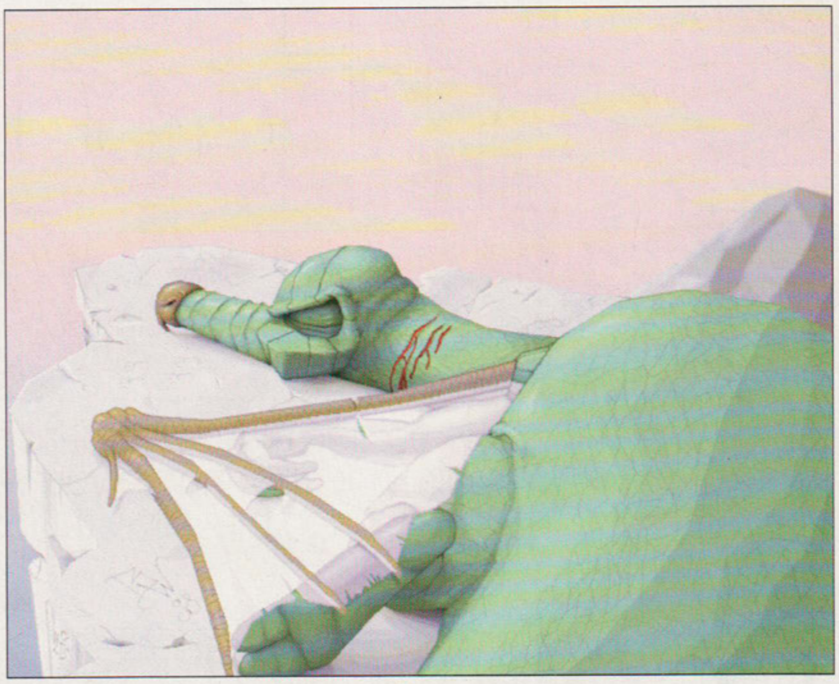




Space Taxi, For Futur, First   All by Daniel Labriet

Even though *Space Taxi* was actually painted in acrylics and scanned into the machine, Daniel shows such a flair for using *PPaint* and *DPaint* for the other two images he submitted we just had to give him the prize. Your work has traces of Richard Corben and others from *Metal Hurlant* and that's just fine by me, Daniel.





Death of the Last Dragon by Ben Woods

Ben's dragon pic reminds me of another picture that I've seen. It's beautifully coloured and detailed and nicely composed to boot. A corker and no mistake.



Open Door by Stephen Thornber

Although it's not his favourite image of the ones he's sent us, *Open Door* is a great composition. It's not often that people actually look at minutiae like a door lock, and so it's nice to have your attention drawn to it. It's also a very good example of what you can do in *Cinema 4D*.



Red Dragon, Works 7 by Kevin Cullen

Kevin's work was originally hand-drawn and then scanned and retouched in art packages on the Amiga, which no doubt gives the colours their richness. His work is very reminiscent of "pulp" sci-fi mags from the fifties, with their bold lines and large areas of filled colour.



Sperm by Andy Watkinson

Andy is a longtime contributor to the *AFCD* and The Gallery and he's won a couple of times too. This is one of his continuing series of images of whales (see? Not that kind of sperm you dirty-minded fools!) and we like the tranquil mystery of it.



Serious disk

AMIGA FORMAT



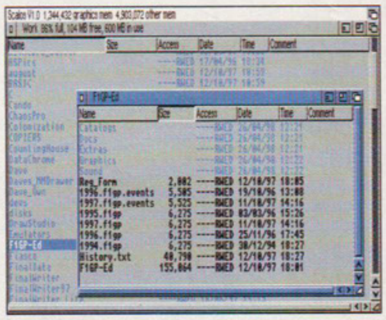
A complete replacement for Workbench? That's ***ScalOS***' aim and this month you've got the opportunity to find out if it's up to the job with this fully-featured evaluation version. David Taylor investigates.

ScalOS

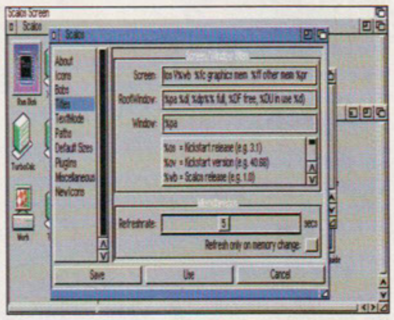
The ScalOS operating system is intended to update many of the areas of the Amiga's standard operating system. It isn't a set of patches though, it's a replacement for the Workbench. The version on the coverdisk allows you to run ScalOS on top of Workbench. In other words, you have to load Workbench first, but the full version can be loaded instead of Workbench and it can used as a complete replacement.

The registration is only US $20 from the author who will send you a keyfile, details of which are included in the documentation.

One of the best parts of ScalOS is that it will run all Amiga commands and programs. The only exceptions to this are utilities that patch the Workbench itself, such as Tools Daemon. However, as you will see, you may not want programs like that under ScalOS anyway.

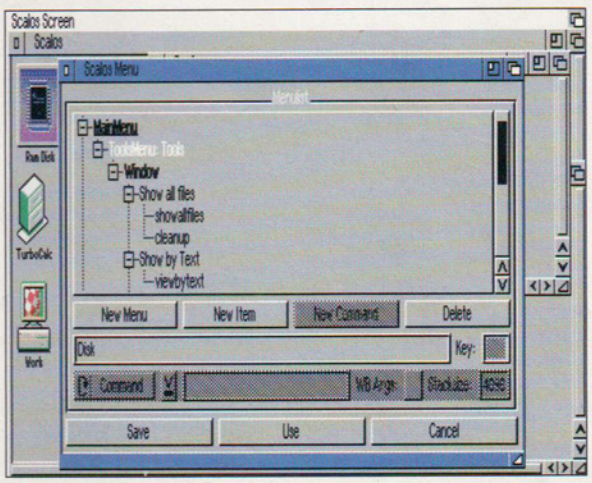


The new look of the text view for windows allows you to click on a column and view the contents according to that column.



The Titles section of the preferences allows you to change what appears in the titlebars of windows and the main OS bar.

> "There are pop-up menus and the plug-in support will hopefully mean third parties will add new features..."



The ScalOS operating system is a blank book where you decide what menus you want to use through this preferences program. Menu items can execute multiple commands.

To use it you must install the package and you must be running Kickstart 3 and MUI. When it is installed you can load it and it will open another screen.

If you register, you can run the emulation mode that replaces Workbench and loads ScalOS at boot up instead. When the OS loads you may think that it looks quite similar to Workbench, and it does.

The visible changes are to the icon display, but essentially it allows you to browse the disks in much the same way as Workbench. The big difference is the menus. There aren't any.

LOST FOR MENUS

It might seem strange for an OS to come without menus, but ScalOS is a blank book where you customise your own menus. Go to the Preferences drawer and open the ScalOS Menu program. Click on New menu and give the menu a name, for example Window. Then add a New Item – this is the menu item – and give it a name, for example Show all Files.

Now add a New Command and then click on the drop down menu at the bottom. A pop up requester will show you the internal ScalOS commands available. Click on Show all file and press enter. This is where ScalOS really gets interesting.

Menu items don't have to only execute a single command. Add a new command under Show all files (you may have to click on the menu item to add a new command in the right place).

Go back to the drop down menu and add Cleanup. If you save this, you'll now have a menu system with a single menu and single item. Open a drawer and select the menu item. It will show all the files and cleanup instantly.

There are other commands you can add, like copy and View by Icon/Text. The menus will automatically adopt the appropriate menu type, such as tick box or bulleted. Try out the View by Text and you'll see that the drawer is different to the standard Amiga one.

Like Windows 95, you have a bar across the top of the screen with details of the files in it (Name, Size, etc).

If you click in the bar, you can view the contents in alphabetical order, size or date order. These menu items can also use AmigaDOS commands and Workbench programs.

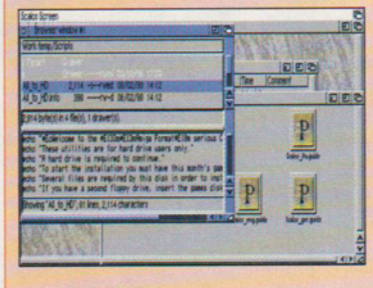
IMPROVE YOUR AMIGA

EXTRA UTILITIES TOO!

As if a replacement for Workbench wasn't enough for one disk, there are in fact another six programs for you to use.

BROWSER

This a simple file browser and text viewer combined together. You can use it to check through your disks and then click on a file and have the contents of it shown in the lower half of the window.



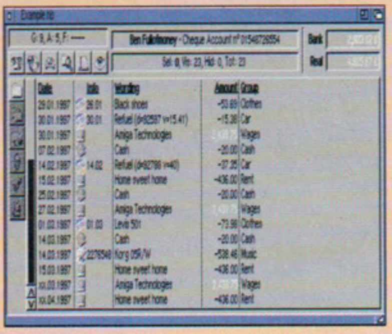
Here's a simple browsing utility that displays the contents of a file in the lower half of the window.

GURULOG

Amazingly, *Gurulog* can be used to create a logfile of system crashes. It includes an interpreter so that after a crash you can get some idea of what caused it. To use it you need to copy two files to your C: drawer and start the program in your startup-sequence so that it can catch errors. See the documentation for full details.

HOMEBANK

This is an MUI banking program that shows the records both graphically and using text. It's very easy to use and can have multiple accounts set up. There's online help and an example account to get you started. Features include grouping, Euro support, car costing for fuel consumption, searching and statistics generation.



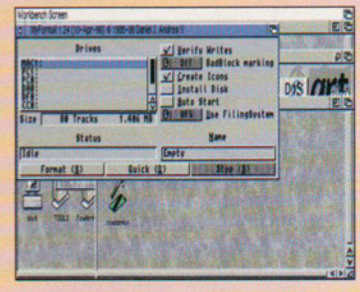
Get yourself out of debt by taking control of your finances, using this new *HomeBank* package.

MODEPRO

The *Mode Promotion* tool has been around for a while and this is the latest version. It can change the screen modes used by programs but can also change some of the menu types used, to make older programs look more up to date.

MY FORMAT

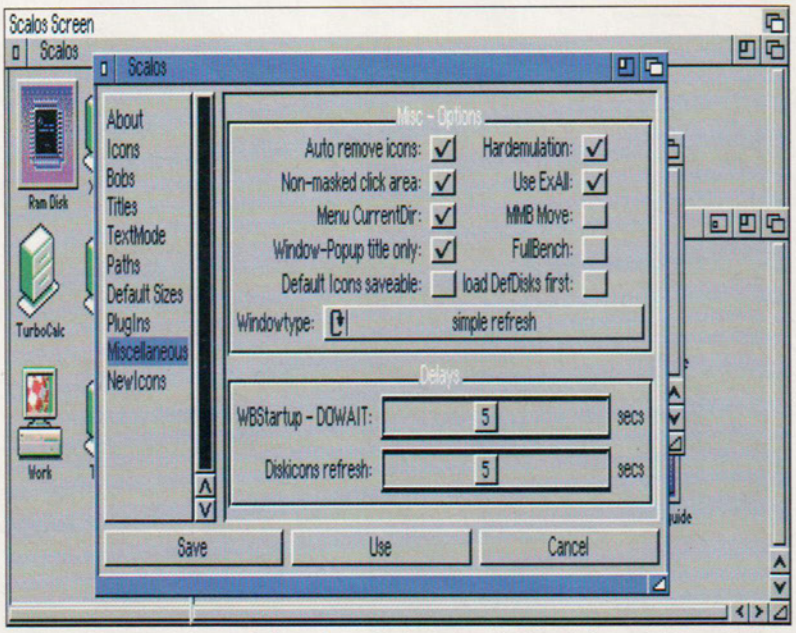
This is a new Workbench version of the format command which not only formats the disks but can also be used to batch format/install and map out bad blocks from disks so you can still use disks that would otherwise be totally useless.



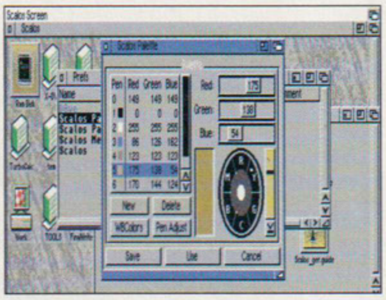
Still using that old Commodore Format command? Get with the times, man. Use *My Format* instead.

URB

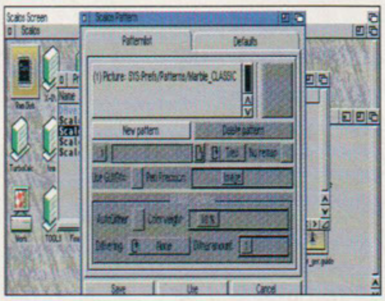
Doubtless an abbreviation for something, *URB* is more importantly a new launcher that can use both text and pictures and sits on all screens so you can have a launch bar permanently available.



The miscellaneous options include various refresh options for the windows and chance to use the OS full screen.



The Palette requestor allows you to choose all of the colours which are to be used by the operating system.



Choose the patterns you want to be used as backdrops within ScalOS. Standard IFF images are supported.

YOUR OWN LOOK

In keeping with the menus, the rest of the OS can be modified to look and act the way you want. Open the ScalOS preferences program and you can change much of the OS's look and feel.

For example, you can change the icons and the way they are drawn. You can also go to the Titles section and change many of the details in the main titlebar (add in Kickstart and processor checking, etc), the disks (free disk space, used disk space, etc) and the drawer titlebars (diskspace, etc).

> In keeping with the menus, the rest of the OS can be modified to look and act the way you want.

In TextMode you can select the font to be used to display drawer contents when viewed as text and change the list types that will be shown. For example, you might not want protection bits to be shown so they can be removed.

Default sizes for windows can be chosen as well as the spacing used on cleanups so you choose how tightly packed you want your windows to be.

There are many other options for plug-ins and the like, as ScalOS can use specially written plug ins to add features to the OS. There are two more preferences programs left. The first is a simple Palette one that allows you to choose all the colours that are used by the operating system and the second is a Pattern one, allowing you to choose the background pattern to be displayed in the main OS Window.

WHAT'S IN THE BOX?

ScalOS also offers many under the cover improvements. It has complete multi-tasking with every window having its own task. It uses an icon datatype system which supports NewIcons and has support for the CyberGraphX and 24-bit datatypes. Windows refresh automatically (and every window can have a different backdrop). Although ToolsDaemon doesn't work, you can import menus from it.

There are pop-up menus and the plug-in support will hopefully mean third parties will add new features to the OS to make it even better.

Games disk

AMIGA FORMAT





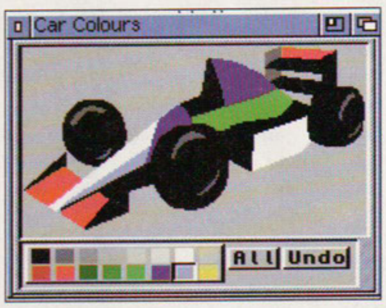
After last month's complete ***Formula One Grand Prix*** giveaway, this month we're bringing you the editor to try out and a cool ***Breakout*** clone. **David Taylor** introduces the goods.

F1GP Editor

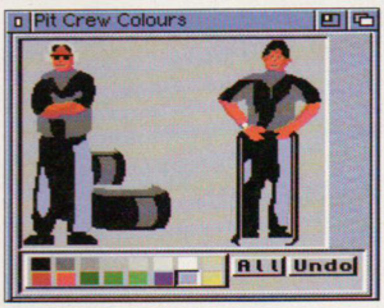


F1GP EXTRAS

Last month *Amiga Format* gave away the complete *Formula One Grand Prix* game. This month we've gathered together a selection of patches and extras for the game to update and improve it. This includes the Shareware copy of the *F1GP Editor*, version 3.36.



You can change the colours of all the cars, editing them in this section by painting the individual parts.



Like the car colours, you can edit the pit crew members and re-paint them, though we don't recommend little green men.

When you have installed and loaded the editor, you'll see that it's split into three separate sections. The first refers to individual file editors. These allow you to edit different parts of the game. If you want to you can open up one of the data files that come with the editor – there are files for the 1994-1998 seasons. The last one is included in a different drawer because it does not come as part of the standard distribution.

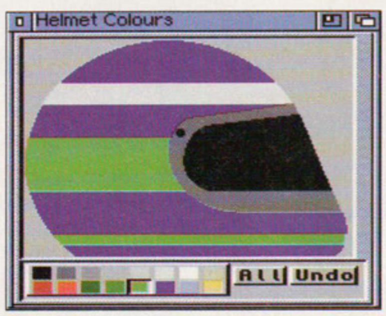
Load the file from the project menu. If you don't want to make any changes, you need to save the data out as an *F1GP* binary file onto disk 2 of the *F1GP* disk set (or wherever it is installed on your hard drive). If you want to edit the files then choose one of the file editors.

> "In the drivers' editor you can change the names of drivers and their skills. You can also change the helmet colours..."

The most visible change you can make is to the colour of the cars. Click on the Team Editor. Here you can edit the number of teams, the drivers used and the car and pit crew colours. Click on the button for one of the last two and you will go to a separate screen with a window showing the car or crew. Click on one of the colours in the palette and then click on the part that you want to change colour.

When you close the windows, the changes will be kept, though you have to save the data file for the changes to be made. In the drivers' editor you can change the names of drivers and their skills. You can also change the helmet colours that are used to identify them.

The Standard options allow you to change some of the game preferences, such as the auto-gears and the standard of the opposition. The other options include cheats (or driving aids as they are euphemistically called), display rates and detail levels.



It may sound a little extreme but you can even edit the individual colours of drivers' helmets.

PATCH WORK

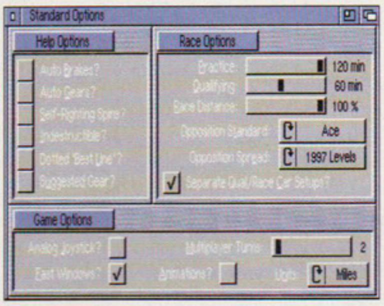
The second set of options involve patching the game to change the fonts used and to re-define the keys used to change gears. There are other more impressive patches too, but these are only available to registered users.

As well as the patches available from *F1GP* editor, we have also included an alternate patch from another author. This patch can speed up the gameplay, add real-time laptime updating, winner notification and much more – read the

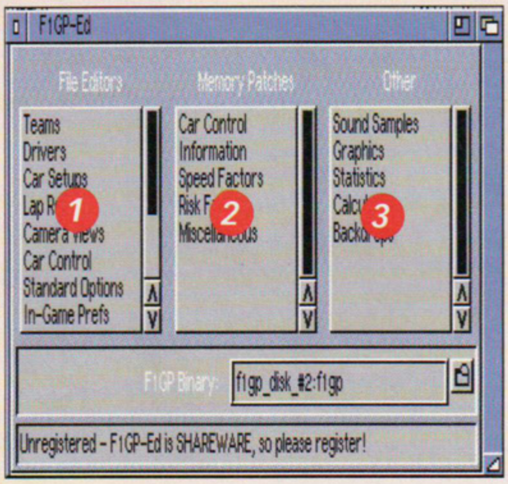
program's documents for more details.

The last section is called "Other" because it deals with everything else! Here you can load new sound samples and graphics so you can change the entire look of the cockpit. As it happens, we've even included a new cockpit design that you can load from the AS_Cockpit98 drawer. There is also another data drawer included that has a whole host of extra data files for the *F1GP* editor and game.

To use all the features of the editor, you need to register it. This costs £6 from the author, Oliver Roberts. There is a full form in the package.



The Standard options allow you to change aspects like the help options, with auto-brake and auto-gears, as well as the opposition standards.



1 – File Editors: This section gives you access to different editors which can change the controls of the game and the colours used by the teams, etc. This is perhaps the fullest part of the editor's capabilities.

2 – Patches: Can patch the game itself so that it behaves differently and can also improve the game's features.

3 – Other: Third party graphics and sounds can be imported and used in the game instead of the default ones. Some examples are included and you can create your own. Most notable is the new cockpit layout you can use.

GOT A PROBLEM WITH F1GP?

PROBLEM:
***F1GP* won't run. It comes up with an error saying that it cannot allocate the timer resource.**

CAUSE:
Nasty PCMCIA device.

SOLUTION:
Remove your PCMCIA CD-ROM drive (Overdrive, Q-drive, etc). *F1GP* doesn't like it and won't work when it is connected.

PROBLEM:
The game starts okay but crashes when I actually start racing!

CAUSE:
You have an '040 or '060 or some other accelerator card. These, in conjunction with *Setpatch*, reset one of the Amiga's vectors, which confuses *F1GP*.

SOLUTION:
You can either get hold of *VBR*, a PD utility that solves the problem, boot with no startup-sequence and run *F1GP* from the CLI or use *F1GP Ed* to fix it.

To do the latter, first run the *F1GP* game from your hard drive. When you get to the copy protection screen, flip back to Workbench (using the Left Amiga and M keys).

Now run *F1GP Ed*. A window will appear allowing you to select from the many different patches. Make whatever changes you wish, but be sure to chose the Memory>Install Patches option from the menu.

Flip back to the *F1GP* game and you can now continue racing without any problems.

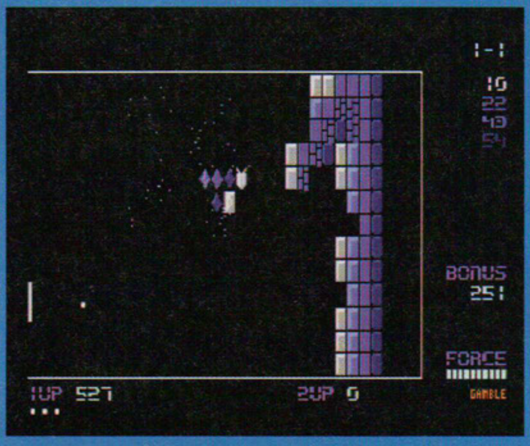
POING 6

Poing has been going as a game for as long as I can remember and it's still one of my favourites. There are many PD levels available to play for this game, but it comes with its own set of default levels. Before you start playing, you need to note a few technical issues. The game requires an assign to a volume called Poing: in order to find the levels and the high scores. It won't load if it doesn't find this. If you are playing from the games disk itself and booting it then you don't need to worry because this is done for you. However, if you want to play the game from Workbench or from a hard drive then you must assign the drawer from which you play the game (af112b:poing6 if you are playing it from the games disk) as Poing:. If you want to install the game to a hard drive, just copy the drawer over and you can add the assign to your user-startup if you want to avoid having to make the assign every time you want to play it.

The game itself is a *Breakout* clone. Once the title screen has loaded, press S to start and grab the mouse. It plays horizontally and you click the left button to launch the ball. The ball will bounce across the screen and hit one of the tiles. You can bounce the ball off the walls. When the ball strikes a tile it will either destroy or weaken it. If a tile is not destroyed then you may need to hit it again with the ball. When the ball bounces back towards you, you need to bounce it back with the bat – it's as simple as that.

Of course, there is more to the game. Some tiles will include special power-ups and events. In fact, on the very first level you'll see the exploding tiles that destroy the ones around them. If you manage to destroy all the tiles without losing a life then you will earn a bonus on the level. You need to be careful of the angles at which you send the ball off, because acute angles will speed up the ball and make it very difficult to knock back. There are spectators watching the game and they will reward you with points if you entertain them. There are fours eyes and each is entertained by different play – for example, one likes the ball to be hit by the bat a lot of times. Extra balls are available when you get higher scores, starting at 20,000.

If you don't want to play the levels in order, you can play them in a random order by pressing R instead of S on the start screen. If you register *Poing 6* then the keyfile will give you access to the level editor that allows you to create your own levels. Contact the author, Paul van der Valk, at falcon@casema.net for details of registration.



It might not look too stunning, but it's incredibly addictive and it'll be a long time before you can drag yourself away from it!

DISK NOT WORKING?

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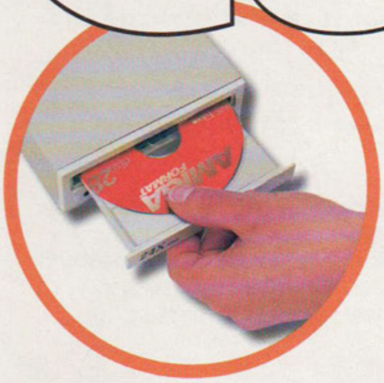
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* **YAM 2 Preview** * Golem Intro * **Res Evil clone** * DrawStudio 2 Lite * **Backgro**

Cover disc



AMIGA FORMAT



Ben Vost dons his tour guide's hat and leads you through the best Amiga CD there is. Hold on tight now!

THINGS YOU MAY HAVE MISSED

AFCDFIND

***AFCDFind* does have the ability to exclude CDs from searches that you make. All you have to do is use the menus. You can also search for specific programs by using the "Exact Matches Only" menu item.**

AFCDPREFS

***AFCDPrefs* doesn't have to be set every time you use our CD. All you need to do is save your settings once and it will never ask you again. The method for this is simply to start *AFCDPrefs* (in the +System+ drawer) and hit Save.**

If the defaults aren't quite to your taste you can always edit the preferences to use the programs you like.

We have tried to make sure that these programs are as flexible as possible and hope that these additional instructions will help you to get the most from them.

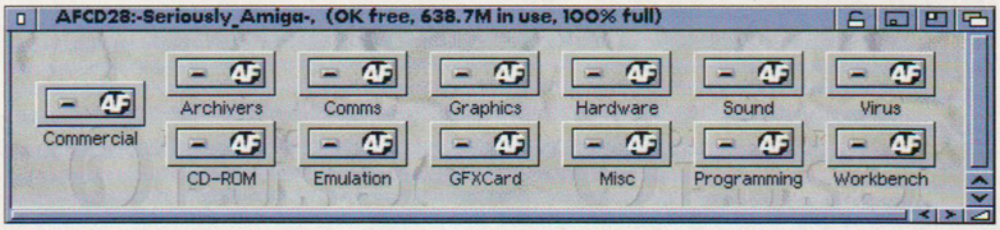
Welcome to *AFCD28*. In keeping with our improving the CD to make it better for you, we have a couple of changes this month that we hope you'll like.

The first and most obvious is that -Seriously_Amiga- has been altered so we no longer have two drawers labelled Commercial and Shareware for you to have to go through before you get to the good stuff. We still have the Commercial drawer, but it's now in the same drawer as all the Shareware drawers we had before.

In addition to this, we've added a Changes file to the Info drawer in +System+ so that you can see the huge number of adjustments we make to improve the CD for you. You'll also notice that there are far fewer drawers in +System+ now to distract you.

We felt that a Prefs drawer was unnecessary since very few of you use it, so we got rid of it altogether, bringing down the total amount of repeated system files to an even lower figure.

This means that when you get a completely full CD from us, you get a CD totally full of brand new stuff, without any System utilities from our very first CDs being repeated.



This should make it quicker for you to get at what you want, and easier for us to organise it too!



With less files for you to look through, the +System+ drawer gets better all the time!

LATEST WOA NEWS!

AFCD28:Ben_Speaks!

Although we'll have an in-depth report in the magazine about the fantastic info given out at the WOA in the middle of May, you'll also be able to find pictures and my very own take on what exactly happened at the show as part of the indispensable Ben_Speaks. Although I'm writing this before the show so I won't know if it's possible, we'll attempt to have an MP3 audio file for you on the CD too. The show promises to be one of the most exciting ever, but right now, we're sitting here in anticipation.

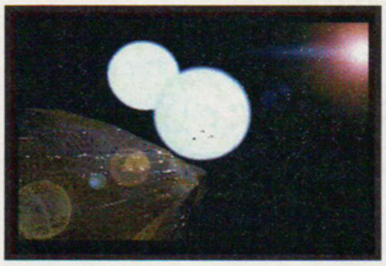




GOLEM INTRO

AFCD28:-ScreenPlay-/Commercial/Golem

Here's the intro for a new game coming from Italy soon. The reason it's impressive is that it manages to combine full screen video and audio at





...ds Unlimited 2 demo * STFax updates * **TurboCalc demo** * Apex Golf demo * **Soliton v1.70** *

Your Stuff!

£50 AF Winner!

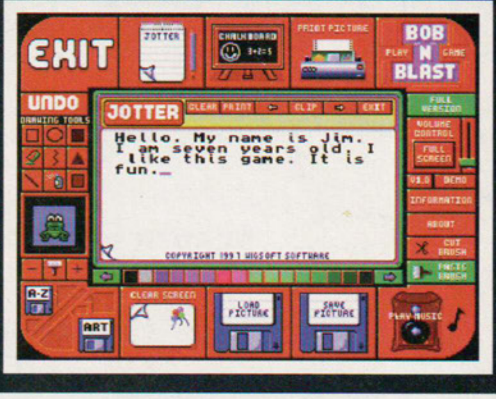
We've got thirty megabytes of cracking stuff that you've written on this month's CD, but as always there can only be one winner, and the winner this month has continued a long tradition of using Amos for educational software with his excellent *Tots* package.

It's a multiple function tool that encompasses drawing, playing games and writing notes, all within a clear and colourful interface. Step forward Les Wigmore to receive your £50 prize!

Other highlights would have to include Chris Haynes's new version of *WB Colony*, an excellent WB game, but for two players only. I know that working out how the chain reactions are supposed to go is a bit of a headache Chris, but what about some AI so that one player can play?

Lee Hemenway (any relation to Dale?) sent us details of how to connect a floppy drive LED in detail, and with pictures, and Barry Beukhof sent us GUIs for MPG audio and Play16 along with more XTR tracks. Richard Burke sent us a variety of things including a saved game for the last level of *Settlers* and filetypes for DOpus 5. Finally, Neil Bullock sent us his latest WOA disk magazine.







A whole set of educational software through one interface. Enticing and easy to use – it's no wonder we gave Les Wigmore the reader prize!



***Golem* looks like it's shaping up to be a blinding game. We only had room on the CD for the intro this month, but there'll be a demo of the game on *AFCD29* for you to play with.**

very little system overhead. What's more, the intro bodes well for gamers everywhere since the file format is being worked on to allow for a better than CDXL format that is easy to edit and use.

The game itself uses the same system and looks very impressive, being a kind of cross between the immediacy of the animation of *Dragon's Lair* and the thought provoking puzzles of *Myst*.

It really does seem as though the main character (who will often take up more than half of the screen while moving) is on video as he responds to your commands.

DRAWSTUDIO LITE

AFCD28:-Seriously_Amiga-/Commercial/DrawStudio_Lite

Graham and Andy Dean's *DrawStudio* is one of the nicest bits of software for the Amiga that we've used for a while so we were doubly pleased that their distributors LH Publishing have allowed us to not only have this huge demo of *DS2*, but also have it on our CD every month for you to use.

DS2 Lite is even more impressive due to the fact that it is fully useable and only limited in very small ways such as:

- No support for deep CyberGraphX screens
- No direct support for *TurboPrint*
- No 24-bit printing
- No PostScript export
- No 24-bit bitmap export
- No text on curve

NEW SHAPESHIFTER

AFCD28:-Seriously_Amiga-/Emulation/ShapeShifter

The first new version of *ShapeShifter* in almost a year and we have it here for you. Version 3.9 contains the following changes, and more:

- Can boot from CD-ROM
- FileDisks are faster
- Some fixes in the serial and CD-ROM drivers
- Ethernet packets are always padded to 60 bytes

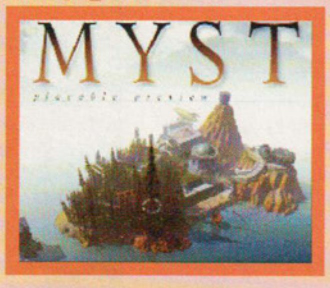
As always, you'll need other items to be able to run *ShapeShifter*, the most important of which is a ROM file like the Amiga's Kickstart, which is necessary before anything else. *ShapeShifter* comes with a tool that allows you to download

Continued overleaf ➡

MYST

AFCD28:-ScreenPlay-Commercial/Myst_DEMO

You've seen it reviewed in the magazine, now try it for yourself in this massive demo of the world's most popular CD game ever. Explore one of the many islands in *Myst* and get to grips with this languid adventure. I'll bet you get hooked...





The Mechanical Age should be enough for you to get an idea of this huge game.

At your fingertips

VIRII OUT!

AFCD28:-Seriously_Amiga-/Virus/Virus_CheckerII

You should look after your hard drive by always running the latest virus checkers, and we have the latest version of THE virus checker for you. *Virus Checker II* (version 1.5) has new virii added to the brainfile, and additional improvements to the interface and the way it works.

SOUND LIKE AN EAGLE!

AFCD28:-Seriously_Amiga /Sound/Eagleplayer2.01

Although we don't carry MODs on our CDs, we know that you guys love 'em and we're pleased to be able to offer you a new MOD player with which to have them pounding out of your speakers.

***EaglePlayer* is one of the longest of this type of programs in development and comes highly recommended by many people. If you haven't seen it before, perhaps you should quit that copy of *HippoPlayer* for a moment and give it a go?**

BUDDHA-BUDDHA-BUDDHA DOH!

AFCD28:-ScreenPlay-/OtherStuff/Simpsons_Doom

Although our Simon Goodwin isn't a noted games player, he does like to get his teeth into the odd game of *Doom*, and they don't come much odder than this *Simpsons* WAD he's unearthed for you. Simon has even set up an icon to run it with *ADoom*, if that's your *Doom* port of choice, that even gets past the annoying message that you have to hit return for. You'll need an official *Doom* WAD for it to work and Simon tested it with the one from *Doom II*.

NEW COMMERCIAL DEMOS!

AFCD28:-Seriously_Amiga-/Commercial/BGsUnlimited2
AFCD28:-Seriously_Amiga-/Commercial/DigitalUniverseDemo
AFCD28:-Seriously_Amiga-/Commercial/TurboCalc
AFCD28:-In_the_Mag-/Workbench/Tornado3D

We have demos of *Background Unlimited 2*, the new CD from EMComputergraphic; *Digital Universe*, the excellent astronomy program from Syzygy Software, whose future hangs in the balance and *Turbocalc 5* from Digita, all ready for you to try out this month.

If you look in the -In_the_Mag-/Workbench directory you'll also find an excellent demo of *Tornado 3D v1.5*, a brand new 3D package that we'll have for review very shortly.

Digital Universe needs MUI to be installed first before you can use it (you'll find it on our CD in the +System+/MUI drawer), but the other three have no such restrictions. However, *Tornado 3D* does require an FPU to work.

READER REQUESTS

AFCD28:-In_the_Mag-/Reader_Requests

We get a lot of comments about how useful our Reader Requests section is to you. On this CD we have lots of handy utilities to help you with Guru numbers so pick whichever is the most useful for you, and a demo of an Amiga *Resident Evil* clone, along with the customary Aminet Index.

← the ROM from your Mac, but they aren't available elsewhere so don't ask us for them!

You'll also need an equivalent of the Amiga's Workbench, which is called "System" on the Mac, but *ShapeShifter* won't work properly with System 8 so you'll need to hunt out a copy of version 7.6 or earlier.



Is it real or is it Memorex? *ShapeShifter*'s Mac emulation is indistinguishable from the real thing.

DISCLAIMER

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(Please remember to put "Coverdisc" in the subject line).

Please note that the helpline staff provide assistance with technical problems directly related to the CD and cannot provide training on the software or hardware in general.

We want your work!

You can either send it to us on floppies (if you are going to send us a multiple floppy backup of your work, please use the version of *ABackup* we supply on the CD in the +System+/Tools/Disk_Tools drawer), Zip disks or CDs (we do take other media formats). We'll return any Zips you send us, so don't worry about getting your disks back.

If you have any further queries about how to send your software in then consult the Submissions Advice on the CD (in Ben_Speaks!, or in the ReaderStuff or +System+/Info drawers).

Your signature: ....

Files you send in this month will probably appear on *AFCD30 – Amiga Format* issue 114, September.

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AF 112 – JULY 1998

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If you want to speak to us about a technical problem, we have a reader call day on Tuesdays. Call us on (01225) 442244 (10am–1pm, 2pm–5pm only). We're sorry, but we can't give games tips over the phone.

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Fusion



Emulation seems to be a timely topic so we'll have full reviews of Fusion 3.1, Siamese and Amiga Forever, plus the latest version of CrossDOS, bringing file compatibility to an Amiga near you!

PLUS:

We'll also be casting our beady eyes over **Genesis** *and* **NetConnect 2**, *the awesome-looking* **Elastic Dreams** *and* **Virtual Karting 2** *– see you there!*

August Issue on sale Thursday 9th July

The contents of future issues may be subject to change – no guarantee is implied or intended.

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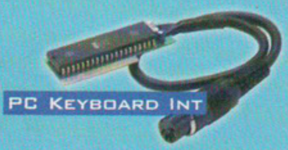
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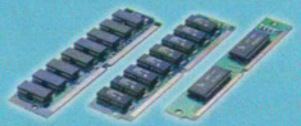
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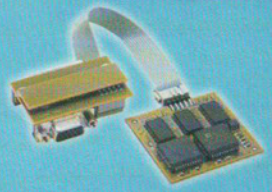
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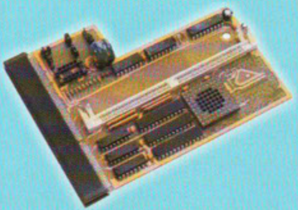
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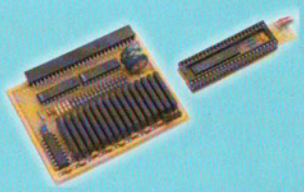
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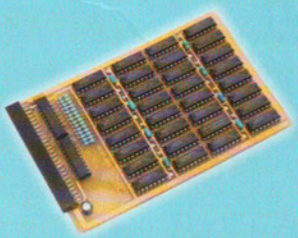
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